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stimulator is linked to a peptide or protein hapten containing B cell and/or cytotoxic I lymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of a heterogeneous population expressing diverse HLA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Yersinia. Spacer amino acid sequences (e.g. Gly-Gly) can be provided between the invasin and Th domains and between the immune stimulator and hapten components. When the hapten is LHRH, then optionally the invasin domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 hepatitis B virus surface antigen; HBV; immunogenic; B-cell epitope; luteinising hormone releasing hormone; LHRH; contraceptive; anticancer; somatostatin; growth promotion; CD4 receptor; HIV-1; antiviral; FMDV; foot and mouth disease virus; immunoglobulin E; IgE; anti-allergic; Plasmodium falciparum; circumsporozoite; antimalarial; CETP; cholesteryl ester transport protein; anti-arteriosclerotic.
                                                                                                                  provided in which a universal immune
                                                                                                                                                                                                                                                                                                                                                                                  prostatic hyperplasia, androgen-dependent carcinoma, prostatic carcinoma, testicular carcinoma, endometriosis, benign uterine tumours, recurrent functional ovarian cysts, (severe) premenstrual syndrome or oestrogen-dependent breast cancer, or for induction of infertility. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New artificial T helper cell epitope and derived immunogens with target
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                The present sequence represents an LHRH-containing immunogenic pe
as above which can be used as a potent vaccine for treating e.g.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Modified MVF Th epitope/LHRH antigenic peptide, SEQ ID NO:43.
                  Immunogenic luteinising hormone releasing hormone peptide(s) that suppress LHRH activity in males and females
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 116; DB 15; Length 45;
Pred. No. 3.5e-10;
0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Promiscuous T-cell epitope; measles virus F protein; MVF;
                                                                                                                                                                                                                                                                                                                            can be omitted from the immune stimulator component.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            19 LSEIKGVIVHRLEGVGGE--HWSYGLRP
                                                                                                                  Synthetic immunogenic peptides are
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ¥Ÿ.
                                                                          Claim 8; Page 88; 213pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY91163 standard; peptide; 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (UNBI-) UNITED BIOMEDICAL INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          72.5%;
85.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99WO-US13975.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 98US-0100412.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Chimeric - Measles virus.
Chimeric - Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-160564/14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       45 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Simi
Matches 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    22-MAY-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY91163;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 9
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treating allergies or arteriosclerosis. Incorporation of a promiscuous treating allergies or arteriosclerosis. Incorporation of a promiscuous treating allergies or arteriosclerosis. Incorporation of a promiscuous of the functional in genetically diverse subjects) into an immunogen continuous a strong T helper cell mediated immune response, resulting in production dig antibodies against a target artifer response, resulting in production dig antibodies against a target cartifer profesins and pathogen-derived T helper epitopes. Sequence AAY91121 represents a promiscuous Thelper epitope (from the measles virus F (MWF) protein and sequences AAY91122-Y91142 are presents a promiscuous The epitope. Sequence AAY91143 represents a promiscuous Th epitope. CC AAY91165 are synthetic epitopes derived from this HBV epitope. CC AAY91165 are synthetic epitopes derived from this HBV epitope. CC AAY91166-Y91167 AAY91127 and AAY91247-Y91244 are antigenic peptides aAY911200 is somatostatin, and AAY91201-Y91207 are antigenic peptides comprising somatostatin, and AAY91201-Y91207 are antigenic peptides comprising somatostatin, and AAY91201-Y91207 are antigenic peptides which may be used to promote growth in livestock. AAX91208 is a immunogens may be used to promote growth in livestock. AAX91208 is a comprising somatostatin, and AAY91201-Y91207 are antigenic peptides which may be used to prevent HIV contection of T cells. AAY90212 is a modified version of a human IgE comprise which may be used to prevent of antigenic peptides which may be used in the treatment of allergies. AAY91220 is a peptide derived from foot and mouth disease virus (FMDV) contingen, and AAY91221 is a Plasmodium falciparum circumsporcacite (CS) target antigen, and AAY91222 is a Plasmodium falciparum circumsporcacite (CS) target comprise and may be used to antigen and any be used in an allaria vaccine. AAY91224 ind and AAY91224 ind and AAY91224 ind and any be used to prevent the ceptope and may be used to antigen and any be used to prevent the ceptope. AAY91221 is a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CETP-derived peptides and AAY91232-Y91241 are immunogens comprising a CETP peptide and a Th epitope which may be used to prevent or treat arteriosclerosis and cardiovascular disease. AAY91247 and AAY91252-Y91257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            are HIV-1 neutralising B-cell epitopes, and AAY91248-Y91251 and
AAY91258-Y91273 are antigenic peptides comprising MVH Th and HIV-1 B-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    epitope which may be used as a component in an anti-HIV-1 vaccine. Avg1198 and ANY91199 are respectively an immunostimulatory invasin protein epitope from Yersinia species, and hinge spacer peptide, both of which may optionally be used in the antigenic peptides of the
                                                                                                                                                                                                                   containing them, are used to induce at helper cell response, specifically against Plasmodium falciparum, cholesterly ester transport protein (CETP) or HIV epitopes, but more generally against any pathogen, immunoreactive self-antigen or tumour antigen. The Th epitopes and peptide immunogens may be used for prevention and/or treatment of infections (HIV, foot-and-mouth disease or malaria); for cancer immunotherapy; for inhibition of the action of luteinising hormone (LHRM) for contraception, treatment of hormone dependent cancer, prevention of boar taint in meat, and immunocastration); for promoting the growth of animals; or for
antigenic site, for immunization against e.g. malaria, arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                    The invention relates to novel promiscuous T helper cell epitopes (T) and immunogenic peptides comprising the Th epitopes of the invention along with B cell epitopes. The Th epitopes and peptide immunogens
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Pred. No. 5.4e-10;
; Mismatches 2;
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                                                                               Example 1; Page 80; 129pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY91175 standard; peptide; 31 AA
                       or human immune deficiency virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                70.6%;
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Best Local Similarity
Matches 23; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         invention.
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AC AAY9
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treatment of cancer
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10-SEP-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9425060-A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    L4-APR-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic.
                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR62721;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Key
Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Domain
                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 8
                                                                                                                                                                                                                                                                                                                                                                                                                                        AAR6272
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                                                 epitope. AAY91223 is a Plasmodium falciparum circumsporozoite (CS) target antigen, and AAY91224 v91225 comprise the CS antigen and an WF Th epitope and may be used in a malaria vaccine. AAY91228 v991231 v991228 v991231 v991228 v991231 v991228 v991231 v991228 v991231 v991238 v991238 v991238 v991238 v991231 v991248 v991231 v99125 v99125 v99125 v991251 v991258 v991251 v991251 v99125 v99125 v991258 v991258 v991273 are antigenic peptides comprising WWH Ih and HIV-1 B-cell
(immunoglobulin E) CH3 domain, and AAY90213-Y90219 are Th epitope/IgE CH3 antigenic peptides which may be used in the treatment of allergies. AAY91220 is a peptide derived from foot and mouth disease virus (FWDV) VPI capsid protein and AAY91221-Y91222 comprise this peptide and a Th
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Helper T cell epitope, F protein, Measles virus, peptide immunogen, LHRH, luteinising hormone-releasing hormone; spermatogenesis, ovulation, oestrus, sexual development, sex hormone, promiscuous T helper epitope, vaccine, contraceptive, hormone-dependent tumour; prostate cancer; breast cancer; endometriosis; boar taint; meat quality; chimera;
                                                                                                                                                                 epitope which may be used as a component in an anti-HIV-1 vaccine.
Ava1198 and Axy91199 are respectively an immunostimulatory invasin
protein epitope from Yersinia species, and hinge spacer peptide, both of
which may optionally be used in the antigenic peptides of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New peptide immunogen containing luteinising hormone-releasing hormone antigen site and helper T cell epitope, for e.g. contraception and
                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptide immunogen comprising a Th epitope and LHRH target antigen.
                                                                                                                                                                                                                                                                                                            2;
                                                                                                                                                                                                                                                                               Length 27;
                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "LHRH antigenic epitope AAY68566"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1..15
/note= "helper Th epitope AAY68540"
                                                                                                                                                                                                                                                                               72.5%; Score 116; DB 21;
85.7%; Pred. No. 1.9e-10;
                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                    3 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY68567 standard; peptide; 27 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "spacer"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        05-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           - Measles virus.
                                                                                                                                                                                                                                                                                                         24; Conservative
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18..27
/note=
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                                                                                                                                                                                                                                                                                            Best Local Similarity
                                                                                                                                                                                                                                                    27 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (UNBI-) UNITED
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21-JUN-1999;
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                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Chimeric
                                                                                                                                                                                                                                                                                 Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Peptide
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                                                                                                                                                                                                                                                                                                         Matches
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The present sequence represents a peptide immunogen comprising a target antigen, luteinising hormone-releasing hormone (LHRH).

The peptide immunogens cause induction of a specific immune response to LHRH which is involved in regulation of specific immune response to LHRH which is involved in regulation of specific immune response to LHRH which is involved in regulation of sex hormones. Provision of a promiscuous T helper epitope (which is functional in genetically diverse subjects) provides optimum immunogenicity to the B cell epitopes of the target antigen and thus high antibody titres against the target antigen. The peptide immunogens of the invention are used to vaccinate against mammalian LHRH, for use as (reversible) contraceptive, control of hormone-dependent tumours (cancer of prostate or breast, also endometricisis); to prevent boar taint (and improve meat
                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Helper T cell epitope; universal immune stimulator; invasin; hapten; vaccine; LHH; lutefainsing hormone releasing hormone; prostate; androgen-dependent carcinoma; antitumour; infertility; measles virus F protein.
                                                                                                                                                                                                                                                                                                                                                                                   5
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                                                                                                                                                                                                                                                                                                                                             Length 27;
                                                                                                                                                                                                                                                                                                                                        72.5%; Score 116; DB 21; Length 2 85.7%; Pred. No. 1.9e-10; rive 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                     3 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "invasin domain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LHRH-containing immunogenic peptide.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
Example 1; Page 63; 102pp; English.
                                                                                                                                                                                                                                                                         quality) and for immunocastration.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAR62721 standard; peptide; 45
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94US-0229275
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                                                                                                                                                                                                                                                                                                                                                                                 24; Conservative
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/note= '
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (updated)
                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                         27 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (LADD/) LADD A E. (WANG/) WANG C Y. (ZAMB/) ZAMB T.
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AAY91156

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Synthetic immunogenic peptides are provided in which a universal immune stimulator is linked to a peptide or protein hapten containing B cell and/or cytotoxic T lymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of a heterogeneous population expressing diverse HLA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Yersinia. Spacer amino acid sequences (e.g. Gly-Gly) can be provided between the invasin and Th domains and between the immune stimulator and hapten components. When the hapten is LHRH, then optionally the invasin domain can be omitted from the immune stimulator component.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   for
                                                                                                                                                                                                                       /note= "measles virus F protein helper T cell epitope"
18..27
/note= "LHRH hapten"
                                                                Helper T cell epitope; universal immune stimulator; invasin; hapten; vaccine; LHRH; luteinising hormone releasing hormone; prostate; androgen-dependent carcinoma; antitumour; infertility; measles virus F protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The present sequence represents an LHRH-containing, invasin-free Immunogenic peptide as above which can be used as a potent vaccine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   treating e.g. prostatic hyperplasia, androgen-dependent carcinoma, prostatic carcinoma, testicular carcinoma, endometriosis, benign uterine tumours, recurrent functional ovarian cysts, (severe) premenstrual syndrome or oestrogen-dependent breast cancer, or for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Immunogenic luteinising hormone releasing hormone peptide(s) that suppress LHRH activity in males and females
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 116; DB 15; Length 27;
Pred. No. 1.9e-10;
0; Mismatches. 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        This sequence is particularly preferred. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claims 8, 12; Page 86; 213pp; English.
                                LHRH-containing immunogenic peptide.
                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              72.5%;
85.7%;
                                                                                                                                                                                                                                                                                                                                                                                                   93US-0057166.
94US-0229275.
                                                                                                                                                                                                                                                                                                                                                                  94WO-US04832
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ladd AE, Wang CY, Zamb T;
 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         nduction of infertility
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NPI; 1994-357910/44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                     (LADD/) LADD A E. (WANG/) WANG C Y. (ZAMB/) ZAMB T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              27 AA;
10-SEP-1995
                                                                                                                                                                                                                                                                                               WO9425060-A1
                                                                                                                                                                                                                                                                                                                                                                  28-APR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                     27-APR-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                    14-APR-1994;
                                                                                                                                                                                                                                                                                                                                10-NOV-1994
                                                                                                                                                       Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
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                                                                                                                                                                                                            Domain
                                                                                                                                                                                                                                             Domain
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The invention relates to novel promiscuous T helper cell epitopes (Th),
and immunogenic peptides comprising the Th epitopes of the invention
calong with B cell epitopes. The The pitopes and peptide immunogens
containing them, are used to induce a T helper cell response,
specifically against Plasmodium falciparum, cholesteryl ester transport
containing them, are used to induce a T helper cell response,
containing (CETP) or HIV peptiopes, but more generally against any pathogen,
immunoceactive self-antigen or tumour antigen. The Th epitopes and
peptide immunogens may be used for prevention and/or treatment of
infections (HHV, foot rand-mouth disease or malaria); for cancer
immunotherapy; for inhibition of the action of luteinising hormone
releasing hormone (LHRH) for contraception, treatment of hormone
releasing hormone (LHRH) for contraception, treatment of hormone
creleasing hormone (LHRH) for contraception, treatment of hormone
creleasing allergies or arteriosclerosis. Incorporation of a promiscuous
treating allergies or arteriosclerosis. Incorporation of a promiscuous
the (functional in genetically diverse subjects) into an immunogen
improves capacity to induce a strong T helper cell-mediated immune
cresponse, resulting in production of antibodies against a target
antigen. Th can replace carrier proteins and pathogen-derived T helper
coptiopes. Sequence AAY91121 represents a promiscuous T helper
from the measles virus F (MVF) protein and sequences AAY91122-Y91142,
horstine, protein and sequences AAY91124 represents a promiscuous The pitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              peptides comprising somatostatin and a Th epitope. Somatostatin immunogens may be used to promote growth in livestock. AAY91208 is a miniman Cb4 CDR2-like domain antigenic site, and AAY91209-Y90211 are WVH Th epitope/CD4 CDR2 antigenic peptides which may be used to prevent HIV infection of T cells. AAY90211 is a modified version of a human Ige
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     comprising an LHRH sequence joined to a promiscuous Th epitope. AAY91197 is the LHRH target antigenic peptide used in these LHRH antigenic peptides. AAY91200 is somatostatin, and AAY91201-Y91207 are antigenic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      New artificial T helper cell epitope and derived immunogens with target antigenic site, for immunization against e.g. malaria, arteriosclerosis or human immune deficiency virus
                                                                                                                                                                                                                 hepatitis B virus surface antigen; HBV; immunogenic; B-cell epitope; luteinising hormone releasing hormone; LHRH; contraceptive; anticancer; somatostatin; growth promotion; CD4 receptor; HIV-1; antiviral; FMDV; foot and mouth disease virus; immunoglobulin E; IgE; anti-allergic; Plasmodium falciparum; circumsporozotie; antimalarial; CETP; cholesteryl ester transport protein; anti-arteriosclerotic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             from hepatitis B virus (HBV) surface antigen, and sequences
AAY91144-Y91155 are synthetic epitopes derived from this HBV epitope.
AAY91156-Y91196, AAY91227 and AAY91242-Y91244 are antigenic peptides
                                                                                                                                                                                               Promiscuous T-cell epitope; measles virus F protein; MVF;
                                                                                                                                              MVF Th epitope/LHRH antigenic peptide, SEQ ID NO:36.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 1; Page 77; 129pp; English.
AAY91156 standard; peptide; 27 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (UNBI-) UNITED BIOMEDICAL INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98US-0100412.
                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                            Chimeric - Measles virus.
                                                                                                                                                                                                                                                                                                                                                                                                                    - Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2000-160564/14.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       21-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-JUN-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     409966957-A2
                                                                                               22-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29-DEC-1999
                                                 AAY91156;
                                                                                                                                                                                                                                                                                                                                                                                                                      Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wang CY;
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Gaps

7

3 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 30

24; Conservative

Similarity

Best Local

Matches

ò qq RESULT 6

3

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Synthetic immunogenic peptides are provided in which a universal immune stimulator is linked to a peptide or protein hapten containing B cell and/or cytotoxic T lymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of a heterogeneous population expressing diverse HiA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Yersinia. Spacer amino acid sequences (e.g. Gly-Gly) can be provided between the invasin and Th domains and between the immune stimulator and hapten
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        components. When the hapten is LHRH, then optionally the invasin domain can be omitted from the immune stimulator component.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      The present sequence represents an LHRH-containing, invasin-free immunogenic peptide as above which can be used as a potent vaccine for
                                                                                                                                              "measles virus F protein helper T cell epitope"
                                                                                                                                                                                            "measles virus F protein helper T cell epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  treating e.g. prostatic hyperplasia, androgen-dependent carcinoma, prostatic carcinoma, testicular carcinoma, endometriosis, benign uterine tumours, recurrent functional ovarian cysts, (severe) premenstrual syndrome or oestrogen-dependent breast cancer, or for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Immunogenic luteinising hormone releasing hormone peptide(s) that suppress LHRH activity in males and females
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 42;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  5;
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Pred. No. 2.3e-10;
1; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 LLSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
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16.30
/note= "measles virus
33.42
/note= "LHRH hapten"
                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAR62707 standard; peptide; 27 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 8; Page 86; 213pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   73.1%;
82.8%;
                                                                                                                                                                                                                                                                                                                                                                                       94WO-US04832
                                                                                                                                                                                                                                                                                                                                                                                                                                   93US-0057166.
94US-0229275.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Zamb T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  infertility.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24; Conservative
    measles virus F protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25-MAR-2003 (updated)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wang CY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (LADD/) LADD A E. (WANG/) WANG C Y. (ZAMB/) ZAMB T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    42 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     nduction of
                                                                                                                                                                                                                                                                                                                                                                                     28-APR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            14-APR-1994;
                                                                                                                                                                                                                                                                                       WO9425060-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                   27-APR-1993;
                                                                                                                                                                                                                                                                                                                                        10-NOV-1994
                                                   Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Ladd AE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
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                                                                                                                          Domain
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 5
AAR62707
                                                                                                    Key
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          g
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic immunogenic peptides are provided in which a universal immune stimulator is linked to a peptide or protein hapten containing B cell and/or cytotoxic T lymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which ellcits an immune response to the coupled peptide in members of a heterogeneous population expensaing diverse HLA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Yersinia. Spacer amino acid sequences (e.g. Gly-Gly) can be provided between the invasin and Th domains and between the immune stimulator and hapten components. When the hapten is LHRH, then optionally the invasin domain ment of the invasin domain and the immune stimulator component.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The present sequence represents an LHRH-containing, invasin-free Immunogenic peptide as above which can be used as a potent vaccine for
                        "measles virus F protein helper T cell epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         treating e.g. prostatic hyperplasia, androgen-dependent carcinoma, prostatic carcinoma, testicular carcinoma, endometriosis, benign uterine tumours, recurrent functional ovarian cysts, (severe)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        premenstrual syndrome or oestrogen-dependent breast cancer, or for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              [mmunogenic luteinising hormone releasing hormone peptide(s) -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 25;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    that suppress LHRH activity in males and females
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               73.1%; Score 117; DB 15;
85.7%; Pred. No. 1.2e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Induction of infertility. Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
                                                                    "LHRH hapten"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LHRH-containing immunogenic peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAR62708 standard; peptide; 42 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 8; Page 84; 213pp; English.
                                                                                                                                                                                                                                                               93US-0057166.
94US-0229275.
                                                                                                                                                                                                                   94WO-US04832
                                                                                                                                                                                                                                                                                                                                                                                                                                   Zamb T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity 85.7 nes 24; Conservative
1..15
/note=
16..25
/note=
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 1994-357910/44.
                                                                                                                                                                                                                                                                                                                                                                                                                              Ladd AE, Wang CY,
                                                                                                                                                                                                                                                                                                                                   (LADD/) LADD A E. (WANG/) WANG C Y.
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                                                                                                                                                                                                                                                                                                                                                                                  (ZAMB/) ZAMB T.
                                                                                                                   WO9425060-A1.
                                                                                                                                                                                                                   28-APR-1994;
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10-SEP-1995
                                                                                                                                                                                                                                                                 27-APR-1993;
                                                                                                                                                                                                                                                                                     14-APR-1994;
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  Domain
                                                 Domain
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AAR62708
  PART TAR A T
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47 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                 Peptide
            Peptide
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  QQ
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                                                                                                                                                                                                            The invention relates to a synthetic immunogen for inducing specific antibodies against gonadotropin releasing hormone (GnRH also known as luteinising hormone releasing hormone. LIRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other synaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper r-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note= "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                   Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "Gonadotrophin releasing hormone epitope
                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                                                                                                                                                                99.4%; Score 159; DB 23; Length 31; 100.0%; Pred. No. 6.6e-17; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                            1 KLLSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
                                                                                                                                                                                                                                                                                                                                                                                                                                         11..16 //note= "Spacer peptide" 17..34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                         Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAU11428 standard; peptide; 47 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chimeric - Plasmodium falciparum.
Chimeric - Mammalia.
                                                                                                                                                                                          Claim 11; Page 7; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic immunogen peptide 9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /label= OTHER
                       04-MAY-2001; 2001WO-US14363.
                                             05-MAY-2000; 2000US-202328P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (1..10 aa)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (first entry)
                                                                                                                                                                                                                                                                                                                                                                                            Best_Local Similarity 100.
Matches 30; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'note=
                                                                                        Srimes S, Michaeli D,
                                                                                                              WPI; 2002-049440/06.
                                                                  (APHT-) APHTON CORP
                                                                                                                                                                                                                                                                                                                                                            31 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Misc-difference
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15-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAU11428;
                                                                                                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peptide
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AAU11428
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The invention relates to a synthetic immunogen for inducing specific antibodies against gonadcropin releasing hormone (GnRH also known set luteinising hormone releasing hormone. LRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic limmunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide
                                                                                                     39..47 / Gonadotrophin releasing hormone epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
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/note= "Malaria CSP protein (288-302 aa)"
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                                                                                                                                                                                                                                              /note= "Amidated glycine or glycinamide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                99.4%; Score 159; DB 23;
100.0%; Pred. No. 1.1e-16;
Live 0; Mismatches 0;
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                                                                    /note= "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LHRH-containing immunogenic peptide.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAR62705 standard; peptide; 25 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 11; Page 11; 43pp; English.
                                                                                                                                                       (2-10 aa)"
47
                                                                                                                                                                                                                                                                                                                                                                                                                                                        04-MAY-2001; 2001WO-US14363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-MAY-2000; 2000US-202328P
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Best Local Similarity 100.
Matches 30; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            epitope or its analogue
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2003, 16:58:36 ; Search time 35.036 Seconds (without alignments) 140.442 Million cell updates/sec
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                              US-09-848-834A-9
160
1 KLLSEIKGVIVHRLEGVEGPSLHWSYGLRPX 31
                                                                                                                                                                                                                                                                                                                                                                                                           Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                1107863 segs, 158726573 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                      OM protein - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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                                                                                                                            September 24,
                                                                                                                                                                                                                Title:
Perfect score:
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A_Geneseq_19Jun03:*

| A_Geneseq_19Jun03:*
| SIDS1/gcddata/geneseqy_embl/AA1980.DAT:*
| SIDS1/gcddata/geneseqy_embl/AA1981.DAT:*
| SIDS1/gcddata/geneseqy_embl/AA1991.DAT:*
| SIDS1/gcddata/geneseqy_embl/AA2000.DAT:*
| SIDS1/gcddata/geneseqy_embl/AA2000.DAT:*
| SIDS1/gcddata/geneseqy_embl/AA2000.DAT:*
| SIDS1/gcddata/geneseqy_embl/AA2000.DAT:*
| SIDS1/gcddata/geneseqy_emeseqy_embl/AA2000.DAT:*
| SIDS1/gcddata/geneseqy_emeseqy_embl/AA2000.DAT:*
| SIDS1/gcddata/geneseqy_embl/AA2000.DAT:*
| SIDS1/g

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

. Description	Synthetic immunoge	Synthetic immunoge	LHRH-containing im	LHRH-containing im	LHRH-containing im	MVF Th epitope/LHR	Peptide immunogen	LHRH-containing im	Modified MVF Th ep
σI	AAU11420	AAU11428	AAR62705	AAR62708	AAR62707	AAY91156	AAY68567	AAR62721	AAY91163
8	23	23	15	15	15	21	21	15	21
% Query Match Length DB	31	47	25	42	27	27	27	45	27
% Query Match	99.4	99.4	73.1	73.1	72.5	72.5	72.5	72.5	9.07
Score	159	159	117	117	116	116	116	116	113
Result No.	Н	7	m	4	S	9	7	œ	6

Modified MVF Th ep Modified MVF Th ep Peptide immunogen Inv epitope/modified MVF Th ep Modified MVF Th ep Modified MVF Th ep LHRH-containing im LHRH-containing im LHRH-containing im LHRH-containing im LHRH-containing im LHRH-containing im LHRH-containing im LHRH-containing im LHRH-containing im Modified MVF Th ep Frizzled putative Modified MVF Th ep SSALI THILHHH. Sy MVFITh-GG-migeZS. Synthetic immunogen Modified MVF Th ep Peptide immunogen Modified MVF Th ep Peptide immunogen Modified MVF Th ep Peptide immunogen Modified MVF Th ep Peptide immunogen Modified MVF Th ep Modified MVF Th ep Modified MVF Th ep Modified MVF Th ep	Peptide immunogen Synthetic immunoge
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555555555555555555555555555555555555555	23
E C C C C C C C C C C C C C C C C C C C	34
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01000000000000000000000000000000000000	79
01111111111111111111111111111111111111	44

ALIGNMENTS

RESULT 1

Gonadotrophin releasing hormone; GnRH; synthetic immunogen; luteinising hormone releasing hormone: LHRH; contraceptive; promiscuous helper T-cell peptide epitope; immunomimic peptide epitope; breast cancer; uterine cancer; gynaecological cancer; endometriosis; uterine fibroid; benign prostatic hypertrophy; prostate cancer. "Gonadotrophin releasing hormone epitope" "Measles virus fusion protein F epitope" "Amidated glycine or glycinamide "Spacer peptide" Location/Qualifiers AAU11420 standard; peptide; 31 AA. Synthetic immunogen peptide 1. (first entry) Chimeric - Measles virus. Chimeric - Mammalia. /note= 19..22 /note= 23..31 /note= 31 /note= WO200185763-A2 Modified-site 12-MAR-2002 Synthetic. AAU11420; Key Peptide Peptide Peptide

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; LENGTH: 40
; TYPE: PRT
; ORGANISM: Artificial
; FEATURE:
; OTHER INFORMATION: synthetic construct
US-10-223-711-11

Query Match
Best Local Similarity 94.1%; Pred. No. 0.0016;
Matches 16; Conservative 0; Mismatches 1; Indels 0; Gaps 0;

Qy | IKLLSEIKGVIVHRLEGV 17
| | | | | | | | | | | | | | | | | | |
Db | 23 KLLSLIKGVIVHRLEGV 39

Search completed: September 24, 2003, 17:33:06
Job time: 15:5429 secs
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5

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OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 378-398 cf OTHER INFORMATION: Plasmodium falciparum CSP protein linked by a spacer to amimo OTHER INFORMATION: id sequence 2-10 of the GRRH hormone
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LOCATION: (25)..(33)

COTHER INDERNATION: Amino acid sequence 2-10 of the human GnRH hormone US-09-848-834A-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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0
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OTHER INFORMATION: Amino acid sequence 378-398 of the Malaria OTHER INFORMATION: (Plasmodium falciparum) circumsporozoite OTHER INFORMATION: (CSP) protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Bakalez.
APPLICANT: Raumaya, Pravin T.P.
TITLE OF INVENTION: Synthetic Chimeric Fimbrin Peptides
FILE REFERENCE: 18525/04058
CURRENT APPLICATION NUMBER: US/10/223,711
CURRENT FILING DATE: 2002-08-19
PRIOR FILING DATE: 1998-09-04
PRIOR FILING DATE: 1998-09-04
PRIOR FILING DATE: 1995-06-02
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Patentin version 3.1
SEQ ID NO 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 33;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION: (33)..(33) OTHER INFORMATION: Amidated glycine or glycinamide
                                                                                                                                                                                                                                           GENERAL INFORMATION:
APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens;
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR PELICATION NUMBER: 60/202,328
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.0
SEQ ID NO 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 45.6%; Score 73; DB 9; I Best Local Similarity 100.0%; Pred. No. 0.0013; Matches 12; Conservative 0; Mismatches 0)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: MOD_RES
COCATION: (1)...(1)
OTHER INFORMATION: Amidated aspartic acid
NAME/KEY: MOD_RES
                                                                                                                                                                                               Sequence 12, Application US/09848834A Patent No. US20020076416A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-10-223-711-11
Sequence 11, Application US/10223711
Publication No. US20030113344A1
GENERAL INFORMATION:
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LOCATION: (21)...(24)
OTHER INFORMATION: Spacer peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
ORGANISM: Artificial Sequence
             19 GPSLHWSYGLRP 30
                                         19 GPSLHWSYGLRP 30
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                                                                                                                                                                      US-09-848-834A-12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
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LOCATION: (1)...(1)

OTHER INFORMATION: Amidated-glutamine
NAME/KEY: MOD_KES

LOCATION: (28)...(28)

OTHER INFORMATION: Amidated-glycine or glycinamide
NAME/KEY: PEPTIDE

LOCATION: (1)...(15)

OTHER INFORMATION: Amino acid sequence 830-844 of the Tetanus Toxoid Precursor OTHER INFORMATION: Tentoxylysin)
NAME/KEY: PEPTIDE

LOCATION: (16)...(19)

OTHER INFORMATION: Spacer peptide

LOCATION: (20)...(28)

OTHER INFORMATION: Amino acid sequence 2-10 of the human GNRH hormone
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COCATION: (1)..(16)

OTHER INFORMATION: Amino acid sequence 288-302 of the measles

OTHER INFORMATION: virus fusion protein, F

US-09-848-834A-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       48.1%; Score 77; DB 9; Length 16; 100.0%; Pred. No. 0.00016; Live 0; Mismatches 0; Indels
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APPLICANT: Aphton Corporation
TITLE OF INVEWION: Chimaric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
FILMS APPLICATION NUMBER: 60/202,328
PRIOR APPLICATION NUMBER: 60/202,328
NUMBER OF SEQ ID NOS: 2000-05-05
SOFTWARE: PATENTIN VERSION 3.0
SEQ ID NO 8
LENGTH: 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TITLE OF INVENTION: Chimeric Peptide Immunogens TITLE OF INVENTION: Chimeric Peptide Immunogens; FILE REFERENCE: 1102865-0047; FILE REFERENCE: 1102865-00488,834A; CURRENT FILING DATE: 2001-05-04; PRIOR RAPPLICATION NUMBER: 60/202,328 PRIOR RAPLICATION NUMBER: 60/202,328 NUMBER OF SEQ ID NOS: 2005-05-05; SEQ ID NOS: 2000-05-05; SEQ ID NO 11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 11, Application US/09848834A Patent No. US20020076416A1 GENERAL INFORMATION:
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ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity 100.0
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                             ORGANISM: Measles virus FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-09-848-834A-11
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Sequence 229, Application US/10285976
; Sequence 229, Application US/10285976
; Publication No. US20030165500A1
; GENERAL INFORMATION:
APPLICANT: Rhee, Chae-Seo
APPLICANT: Walni, Sen
APPLICANT: Walni, Sen
APPLICANT: Workingt
APPLICANT: Corrow, Defence M.
APPLICANT: The Regents of the University of California
TITLE OF INVENTION: Wht and Frizzled Receptors as Targets for Immunotherapy
TITLE OF INVENTION: Whe and Frizzled Receptors as Targets
TITLE OF INVENTION: WHERE: US/10/285,976
CURRENT APPLICATION NUMBER: US 60/287,995
FRIOR FILING DATE: 2001-01
PRIOR APPLICATION NUMBER: WO PCT/US02/13802
PRIOR FILING DATE: 2001-05-01
PRIOR FILING DATE: 2001-05-01
PRIOR SEQ ID NOS: 232
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 229
APPLICANT: Malini, Sen
TITLE OF INVENTION: IMMUNOLOGIC COMPOSITIONS AND METHODS FOR
TITLE OF INVENTION: STUDYING AND TREATING CANCERS EXPRESSING FRIZZLED ANTIGENS
FILE REFERENCE: 22000-20629.00
CURRENT APPLICATION NUMBER: US/09/847,102A
CURRENT FILING DATE: 2001-05-01
NUMBER OF SEQ ID NOS: 138
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 31
LENTH: 75
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CTHER INFORMATION: Description of Artificial Sequence:PFZD2-MMVF; OTHER INFORMATION: measles virus fusion (MVF) epitope fused to US-10-285-976-229
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                                                                                                                                                                                                                                                                                                                                                                                                                                Score 78; DB 11; Length 75;
Pred. No. 0.00062;
0; Mismatches 1; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 KLLSEIKGVIVHRLEGVE 18
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Best Local Similarity 94.4%;
Matches 17; Conservative C
                                                                                                                                                                                                                                                                                                             ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                             ; OTHER INFORMATION: PF2D2-MMVF
US-09-847-102A-31
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                                                                                                                  LOCATION: (1)...(10)

OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone
NAME/KEY: PEPTIDE
LOCATION: (11)..(15)

OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTIDE
LOCATION: (17)..(37)

OTHER INFORMATION: Amino acid sequence 947-967 of the Tetanus toxoid precursor (Tent
OTHER INFORMATION: oxylysin
NAME/KEY: PEPTIDE
LOCATION: (38)..(41)

OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTIDE
NAME/KEY: PEPTIDE
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tive 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 10, Application US/10223711
Fublication No. US20030113344a1
GENERAL INFORMATION:
APPLICANT: Bakaletz, Lauren O.
APPLICANT: Raumaya, Pravin T.P.
TITLE OF INVENTION: Synthetic Chimeric Fimbrin Peptides
FILE REFERENCE: 18525/04048
CURRENT FILING DATE: 2002-08-19
PRIOR APPLICATION NUMBER: 09/148,711
PRIOR FILING DATE: 1998-09-04
PRIOR FILING DATE: 1995-06-02
PRIOR FILING DATE: 1995-06-02
PRIOR FILING DATE: 1995-06-02
SOSTWARE: Patentin Version 3.1
SEQ ID NO 10
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                                                    LOCATION: (50)..(50)
OTHER INFORMATION: Amidated glycine or glycinamide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OTHER INFORMATION: synthetic construct
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Publication No. US20030044409A1
GENERAL INFORMATION:
APPLICANT: University of California
APPLICANT: Carson, Dennis A.
APPLICANT: Ree, Chae. Seo
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Matches 13; Conserva
                                                                                                 NAME/KEY: PEPTIDE
                             NAME/KEY: MOD_RES
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US-09-847-102A-31
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US-10-223-711-10
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FEATURE:
OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of hem
OTHER INFORMATION: GreH linked by a spacer to amino acid sequence 947-967 of the
OTHER INFORMATION: anus toxoid precursor (Tentoxylysin) protein linked by a space
OTHER INFORMATION: o amino acid sequence 2-10 of human GRRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 947-967 \subset OTHER INFORMATION: Tetanus toxoid precursor (Tentoxylysin) linked by a spacer \hookrightarrow OTHER INFORMATION: ino acid sequence 2-10 of the GRRH hormone
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LOCATION: (1)...(1)
OTHER INFORMATION: Amidated phenylalanine
NAME/KEY: PEPTIDE
LOCATION: (1)...(21)
OTHER INFORMATION: Amino acids 947-967 of the Tetanus Toxoid Precursor OTHER INFORMATION: (Tentoxylysin)
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LOCATION: (22)..(25)
OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTIDE
LOCATION: (26)..(34)
OTHER INFORMATION: Amino acids 2-10 of the human GnRH hormone
NAME/KEY: WOD_RES
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OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
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Pred. No. 0.00018;
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     ; Sequence 10, Application US/09848834A
; Patent No. US20020076416A1
; GENERAL INFORMATION:
TITLE OF INVENTION: Chimeric Peptide Immunogens
; FILE REFERENCE: 1102865-0047
; CURRENT APPLICATION NUMBER: US/09/848,834A
; PRIOR APPLICATION NUMBER: 60/202,328
; PRIOR FILING DATE: 2001-05-04
; PRIOR FILING DATE: 2000-05-05
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APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
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PRIOR FILING DATE: 2000-05-05
NUMBER OF SEO ID NOS: 20
SOFTWARE: Patentin version 3.0
SEO ID NO 18
LENGTH: 50
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SOFTWARE: Patentin version 3.0
SEQ ID NO 10
LENGTH: 34
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Best Local Similarity 92.9%;
Matches 13; Conservative
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US-09-848-834A-18
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NAME/KEY: PEPTIDE
LOCATION: (1)...(10)
OTHER INFORMATION: Amino acid sequence 1-10 of the human GRRH hormone
NAME/KEY: PEPTIDE
LOCATION: (11)...(18)
OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTIDE
LOCATION: (19)...(34)
OTHER INFORMATION: Amino acid sequence 288-302 of the Measles
OTHER INFORMATION: Amino acid sequence 288-302 of the Measles
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OTHER INFORMATION: Description of Artificial Sequence: PMMVF-ZD2
OTHER INFORMATION: measles virus fusion (MVF) epitope fused to
OTHER INFORMATION: frizzled domain
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TITLE OF INVENTION: Chimaric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SEQ ID NOS: 20
SEQ ID NO 13
LENGTH: 34
PRIOR APPLICATION NUMBER: US 60/287,995
PRIOR FILING DATE: 2001-05-01
PRIOR APPLICATION NUMBER: W0 PCT/US02/13802
PRIOR FILING DATE: 2002-05-01
NUMBER OF SEQ ID NOS: 232
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 231
LENGTH: 75
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                                                                                                                                                                                                                  TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT ORGANISM: Artificial Sequence
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US-10-285-976-231
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US-09-848-834A-10
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APPLICANT: Carson, Dennis A.
APPLICANT: Carson, Dennis A.
APPLICANT: Rhee, Chae-Seo
APPLICANT: Corr, Maripat
APPLICANT: Corr, Maripat
APPLICANT: Corr, Maripat
APPLICANT: Leonid M.
APPLICANT: Leonid M.
APPLICANT: Malini, Sen
TITLE OF INVENTION: STUDYING AND TREATING CANCERS EXPRESSING FRIZZLED ANTIGENS
FILLE FREERENCE: 22000-206629.00
CURRENT APPLICATION NUMBER: US/09/847,102A
CURRENT APPLICATION NUMBER: US/09/847,102A
NUMBER OF SEO ID NOS: 138
SOFTWARE: FASTSEQ for Windows Version 4.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Publication No. US20030165500A1
GENERAL INFORMATION:
APPLICANT: Rhee, Chae-Seo
APPLICANT: Malin, Sen
APPLICANT: Mu, Christina
APPLICANT: Leoni, Lorenzo M.
APPLICANT: Corr, Maripat
APPLICANT: Corr, Maripat
APPLICANT: The Regents of the University of California
APPLICANT: The Regents of the Corr, The Regents of the University of California
TITLE OF INVENTION: MA Head and Neck Squamous Cell Carcinomas
TITLE OF INVENTION: 1n Head and Neck Squamous Cell Carcinomas
FILE REPREENCE: 023070-130320US
CURRENT APPLICATION NUMBER: US/10/285,976
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                           Gaps
TITLE OF INVENTION: Stabilized Synthetic Immunogen Delivery System FILE REFERENCE: Immunogen Delivery System CURRENT APPLICATION NUMBER: US/10/076,674
CURRENT FILING DATE: 2002-04-23
NUMBER OF SEQ ID NOS: 11
SOFTWARE: Patentin version 3.1
SEQ ID NO 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .;
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                                                                                                                                                                                                                                                                                                          Length 45;
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61.9%; Score 99; DB 11; Length 75;
Best Local Similarity 95.5%; Pred. No. 5.6e-07;
Matches 21; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                       Score 116; DB 12;
Pred. No. 1.1e-09;
                                                                                                                                                                                                                                                                                                                                                         0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                       3 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
                                                                                                                                                                                                                                                                                                                                                                                                                                      19 LSEIKGVIVHRLEGVGGE--HWSYGLRP 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 KLLSLIKGVIVHRLEGVEGPSL 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 231, Application US/10285976 Publication No. US20030165500A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 33, Application US/09847102A Publication No. US20030044409A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 KLLSEIKGVIVHRLEGVEGPSL 22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: University of California
                                                                                                                                                                                                                                                                                                       72.5%;
85.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; OTHER INFORMATION: PMMVF-FZD2 US-09-847-102A-33
                                                                                                                                                                                                                                                                                                                                                         24; Conservative
                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 24; Conserv
                                                                                                                                                                                                          TYPE: PRT
ORGANISM: Human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 4
US-09-847-102A-33
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US-10-285-976-231
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LENGTH: 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
                                                                                                                                                                                     LENGIH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             δλ
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INFORMATION: (1)...(1)

OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LOCATION: (19)..(34)
OTHER INFORMATION: Amino acid sequence 288-302 of the Measles virus fusion protein,
NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: PEPTIDE LOCATION: (39)..(47) OTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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                                                                                   Length 31;
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                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCATION: (47)...(47)
OTHER INFORMATION: Amidated-glycine or glycinamide
          ; OTHER INFORMATION: Amidated glycine or glycinamide US-09-848-834A-9
                                                                                DB 9; L
4.3e-16;
thes 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  pred. No. 6.9e-16;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: U5/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR PILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.0
SEQ ID NO 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              99.4%; Score 159; DB 9;
100.0%; Pred. No. 6.9e-16,
iive 0; Mismatches 0,
                                                                                Query Match 99.4%; Score 159; DE Best Local Similarity 100.0%; Pred. No. 4.3 Matches 30; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1 KLLSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               17 KLLSEIKGVIVHRLEGVEGPSLHWSYGLRP 46
                                                                                                                                                                                   1 KLLSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
                                                                                                                                                                                                            Sequence 17, Application US/09848834A Patent No. US20020076416A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: (11)..(18)
OTHER INFORMATION: Spacer peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCATION: (35)..(38)
OTHER INFORMATION: Spacer peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 9, Application US/10076674
Publication No. US20030165478A1
GENERAL INFORMATION:
APPLICANT: SOKOll, Kenneth K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 99.4
Best Local Similarity 100.
Matches 30; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME/KEY: MOD_RES
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US-10-076-674-9
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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OM protein - protein search, using sw model

September 24, 2003, 16:57:10 ; Search time 15.5429 Seconds
(without alignments)
301.778 Million cell updates/sec Run on:

US-09-848-834A-9 Title:

1 KLLSEIKGVIVHRLEGVEGPSLHWSYGLRPX 31 160 Perfect score: Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

566894 seqs, 151307093 residues Searched:

Total number of hits satisfying chosen parameters: Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 08
Maximum Match 1008
Listing first 45 summaries

Database

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3. cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
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12. cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep:*
13. cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.pep:*
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18. cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep:*
18. cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep:* Published_Applications_AA:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	Sequence 9, Appli	Sequence 17, Appl	Sequence 9, Appli	Sequence 33, Appl	Sequence 231, App	Sequence 13, Appl	Sequence 10, Appl	Sequence 18, Appl	Sequence 10, Appl	Sequence 31, Appl	ഹ	Sequence 8, Appli	Sequence 11, Appl	Sequence 12, Appl	Sequence 11, Appl
ID	US-09-848-834A-9	US-09-848-834A-17	2 US-10-076-674-9	1 US-09-847-102A-33	2 US-10-285-976-231	US-09-848-834A-13	US-09-848-834A-10	US-09-848-834A-18	5 US-10-223-711-10	1 US-09-847-102A-31	2 US-10-285-976-229	US-09-848-834A-8	US-09-848-834A-11	US-09-848-834A-12	5 US-10-223-711-11
& Query Match Length DB	31 9	47 9	45 13	75 13	75 13	34 9	34 9	50 9	40 15	75 11	75 12	16 9	28 9	33 9	40 15
Query	99.4	99.4	72.5	61.9	61.9	53.8	49.4	49.4	48.8	48.8	48.8	48.1	45.6	45.6	45.6
Score	159	159	116	66	66	86	79	79	78	78	78	77	73	73	73
Result No.	1	7	m	4	5	9	7	œ	6	10	11	12	13	14	15

NAME/KEY: MOD_RES LOCATION: (31)..(31)

Sequence 19, Appl Sequence 20, Appl Sequence 16, Appl Sequence 8, Appl Sequence 8, Appli	22, 20, 18,	37, 29, 3, 4 48, 40,	51 14 14 35 36 40	Sequence 42, Appl Sequence 27, Appl Sequence 30, Appl Sequence 34, Appl Sequence 34, Appl Sequence 55, Appl Sequence 55, Appl Sequence 41, Appl Sequence 41, Appl
US-09-848-834A-19 US-09-848-834A-20 U US-09-747-802-16 US-09-747-802-30 US-09-865-294-8			US-09-747-802-51 US-09-865-294-43 US-09-951-061A-141 US-09-747-802-35 US-09-747-802-38 US-09-747-802-40	
46 9 51 9 15 11 15 11	15 11 15 12 550 10 550 10	15 11 15 11 15 11 15 11 15 15 15 15 15 1	19 15 15 15 11 11 11 11 11 11 11 11 11 11	
73 45.6 73 45.6 72 45.0 72 45.0 72 45.0	22 445.0 24 45.0 26.0	44444	4 4 4 4 4 4	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
16 17 18 19	22 22 24 24 24	2000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8

ALIGNMENTS

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FEATURE:
COTHER INFORMATION: Chimeric peptide made up of amino acid sequence 288-302 of the OTHER INFORMATION: asels virus fusion protein, F linked by a spacer peptide to am OTHER INFORMATION: acid sequence 2-10 of the GRRH hormone
NAME/KEY: MOD_RES
LOCATION: (1). (1)
OTHER INFORMATION: Amidated Lysine
NAME/KEY: PEPTIDE
LOCATION: (1)..(15)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LOCATION: (1)...(15)

OTHER INFORMATION: Peptide corresponds to the amino acid sequences 288-302 of the OTHER INFORMATION: measles virus fusion protein, F

NAME/KEN: PEPTIDE

LOCATION: (19)...(22)

OTHER INFORMATION: Spacer peptide

NAME/KEY: PEPTIDE

LOCATION: (23)...(31)

OTHER INFORMATION: Peptide corresponds to amino acid sequences 2-10 of the human other information: GRRH hormone
US-09-848-834A-9
; Sequence 9, Application US/09848834A
; Patent No. US20020006416A1
; GENERAL INFORMATION:
; APPLICANT: Aphton Corporation
; TITLE OF INVENTION: Chimeric Peptide Immunogens
; TILE REFERENCE: 1102865-0047
; CURRENT APPLICATION NUMBER: US/09/848,834A
; CURRENT FILING DATE: 2001-05-04
; PRIOR APPLICATION NUMBER: 60/202,328
; PRIOR APPLICATION NUMBER: 60/202,328
; NUMBER OF SEQ ID NOS: 20
; SOSTWARE: Patentin Version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 9
LENGTH: 31
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us-09-848-834a-9.rai

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Score 110; DB 3; Length 31;
Pred. No. 3.6e-10;
1; Mismatches 5; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 55, Application US/09770014
Patent No. 6559282
GENERAL INFORMATION:
APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: NOVEL LHRH PEPTIDE
TITLE OF INVENTION: IMMUNGENS
NUMBER OF SEQUENCES: 106
    ADDRESSEE: Morgan & Finnegan, L.L.P. STREET: 345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
ADDRESSEE: Morgan & Finnegan, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                           1151-4157
                                                                                                                                                               COMPUTER: IBM PC Compatible OPERATING SYSTEM: PC Windows SOFTWARE: Word 97 CURRENT APPLICATION DATA: APPLICATION NUMBER: US/09/303,323 FILING DATE: 30-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/770,014
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: 09/100,414
FILING DATE: 20-JUNE-1998
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                   09/100,414
                                                                                                                                                                                                                                                                                      CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
APPLICATION NUMBER:
FILING DATE: 20-JUNE-1998
ATTORNEY/AGENT INFORMATION:
NAME: MARIA H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151.
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
TELEFAX: 212-751-6849
INFORMATION FOR SEO ID NO: 55:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           IBM PC compatible
SYSTEM: PC Windows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Maria H. Lin
REGISTRATION NUMBER: 29,323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           68.8%;
78.6%;
                                                                                              ZIP: 10154-0054
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY: USA
ZIP: 10154-0054
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET: 345 Park Avenue CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
LENGTH: 31 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity 78.65
Matches 22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear

MOLECULE TYPE: peptide

US-09-303-323-55
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPERATING SYSTEM:
SOFTWARE: Word 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       amino acid
                                             New York
                                                                                      USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-770-014-55
                                                                                      COUNTRY:
                                                              STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE:
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                                                                                                                                                Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         68.8%; Score 110; DB 3; Length 31; 78.6%; Pred. No. 3.6e-10; Live 1; Mismatches 5; Indels
                                                                                                 Query Match 70.6%; Score 113; DB 4; Length 27; Best Local Similarity 82.1%; Pred. No. 1.1e-10; Matches 23; Conservative 1; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: NOVEL LIRH PEPTIDE
TITLE OF INVENTION: INMUNOGENS
NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
ADDRESSE: MOTGAN & Finnegan, L.L.P.
STREET: 345 Park Avenue
CITY: Now York
STATE: NY
COUNTRY: USA
                                                                                                                                                                                     3 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
                                                                                                                                                                                                          1 LSEIKGVIVHKLEGVGGE--HWSYGLRP 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY: USA
ZIP: 10154-0054
COMPUTER READABLE FORM:
MEDLUM TYPE: FLOPPY disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC Windows
SOFTWARE: Word 97
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/100,414B
FILLING DATE: 20-JUNE-1998
CLASSIFICATION: 424
ATTORNEY, AGENT INFORMATION:
NAME: MATIA H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-4157
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
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Patent No. 6228987
GENERAL INFORMATION:
APPLICANT: Wang, Chang YI
TITLE OF INVENTION: NOVEL LIRH PEPTIDE
TITLE OF INVENTION: IMMUNOGENS
NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                      RESULT 13
US-09-100-414B-55
Sequence 55, Application US/09100414B
Patent No. 6025468
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: 212-751-6849
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 68.8°
Best Local Similarity 78.6°
Matches 22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LENGTH: 31 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE: 212-751-6849
; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-09-770-014-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: linear
MOLECULE TYPE: peptide
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US-09-303-323-55
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Pred. No. 1.1e-10;
1; Mismatches 2; Indels
                                                     OPERATING SYSTEM: PC WINDOWS
SOFTWARE: WORD 97
CURRENT APPLICATION DATA:
APPLICATION NDATA:
CLASSIFICATION:
FILING DATE: 30-APR-1999
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/100,414
FILING DATE: 20-JUNE-1998
ATTORNEY/AGENT INFORMATION:
NAME: MATIA H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-4157
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION INFORMATION INFORMATION INFORMATION INFORMATION INFORMATION INFORMATION INFORMATION INFORMATION
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Patent No. 6559282
GENERL INFORMATION:
APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: IMMUNOGENS
NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: Morgan & Finnegan, L.L.P.
STREET: 345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1151-4157
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/770,014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/100,414
FILING DATE: 20-JUNE-1998
ATTORNEY/AGENT INFORMATION:
NAME: MATIA H. Lin
REGISTRATION NUMBER: 29,323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY: USA
ZIP: 10154-0054
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC Windows
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC Windows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           70.6%;
82.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity 82.1
Matches 23; Conservative
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            27 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New York
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-09-303-323-43
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US-09-770-014-43
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Nev
STATE: N:
COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
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Pred. No. 1.1e-10;
1; Mismatches 2; Indels
     Indels
     0; Mismatches
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Patent No. 6228987
GENERAL INFORMATION:
APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: NOVEL LHRH PEPTIDE
TITLE OF INVENTION: IMMUNGENS
NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
ADDRESSEE: Morgan & Finnegan, L.L.P.
                                                                                                                                                                                                                                                   Sequence 43. Application US/09100414B
Fatent No. 6025468
GENERAL INFORMATION:
TITLE OF INVENTION: INMUNOCENS
TITLE OF INVENTION: INMUNOCENS
CORRESPONDENCES: 106
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & Finnegan, L.L.P.
STREET: 345 Park Avenue
                                                              3 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
                                                                                            3 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 LSEIKGVIVHKLEGVGGE--HWSYGLRP 26
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Word 97
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/100,414B
FILING DATE: 20-JUNE-1998
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE: NY
COUNTY: USA
ZIP: 10154-0054
COMPUTER READABLE FORM:
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC WINGOWS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ATTORNEY/AGENT INFORMATION:
NAME: MATIA H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/OOCKET NUMBER: 1151
TELECOMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
TELEPHONE: 212-751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 43:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ouery Match 70.6%;
Best Local Similarity 82.1%;
Matches 23; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        : 27 amino acids amino acid
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     24; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: USA
ZIP: 10154-0054
COMPUTER READABLE FORM:
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COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-303-323-43
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CITY: Ne
     Matches
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Gaps

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GENERAL INFORMATION:
APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
NUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 116; DB 2; Length 45; Pred. No. 6.7e-11;
                                                                                                                                                                         Length 45;
                                                                                                                                                                    Score 116; DB 1; Length 45
Pred. No. 6.7e-11;
0; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WEDJUN TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
COMPATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/488,351A
FILING DATE: 7-JUN-1995
FILING DATE: 7-JUN-1995
FILING DATE: 7-JUN-1995
FILING DATE: 7-JUN-1995
FILING DATE: 14-APR-1994
CLASSIFICATION NUMBER: US 08/229,275
FILING DATE: 14-APR-1994
PRIOR APPLICATION: 424
PRIOR APPLICATION UMBER: US 08/229,275
FILING DATE: 14-APR-1994
CLASSIFICATION: 424
PRIOR APPLICATION UMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION: ALA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: 1151-4146 US2 TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                            3 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
                                                                                                                                                                                                                                                                                  19 LSEIKGVIVHRLEGVGGE--HWSYGLRP 44
                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 33, Application US/08488351A Patent No. 5843446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Maria C.H. Lin
REGISTRATION NUMBER: 29,323
                                                                                                                                                                      72.5%;
85.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   72.5%;
85.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (212)415-8745
(516)751-6849
                                             45 amino acids
                                                                                                                                                                                                                 Conservative
INFORMATION FOR SEQ ID NO:
                        SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEPHONE: (212)415-87
TELEFAX: (516)751-6849
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE CHARACTERISTICS:
                                                                              TOPOLOGY: linear

MOLECULE TYPE: peptide

US-08-446-692-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; MOLECULE TYPE: peptide US-08-488-351A-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cli...
STATE: Nx
STATE: Nx
COUNTRY: US
...
10154-0053
                                                               amino acid
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Best Local Similarity
Matches 24; Conserv
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                        US-08-488-351A-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY:
                                      LENGTH:
                                                                                                                                                                                                                                                                                                                                                                    RESULT 9
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APPLICANT: Mang, Chang Yi
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
NUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS:
STREET: 345 Park Avenue
CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         72.5%; Score 116; DB 4; Length 2/
85.7%; Pred. No. 3.7e-11;
....matches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: US

ZIP: 10154-0053

ZIP: 10154-0053

COMPUTER READBLE FORM:
MEDIUW TYPE: FLOPPY disk
COMPUTER: IBM PC COMPATIDLE
OFFRATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PATENTIN RC-BOS/MS-DOS
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/446,692
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: Maria C.H. Lin
RECISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-4146 US2
TELECOMUNICATION INFORMATION:
TELEPHONE: (212)415-8445
TELEFAX: (516)751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/100,414
FILIND DATE: 20-UNE-1998
ATTORNEY/AGENT INFORMATION:
NAME: MATIA H. Lin
REGISTRATION NUMBER: 29,323
REFRENCE/CDOCKET NUMBER: 1151-4157
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
TELEFAX: 212-758-4800
INFORMATION FOR SEQ ID NO: 36:
SEQUENCE CHARACTERISTICS:
LENGTH: 27 amino acids
                        200 This in the comparities of the computer readable form:
MEDIUM TYPE: Floppy disk COMPUTER: IBM PC compatible OPERATING SYSTEM: PC Windows SOFTWARE: Word 97 CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/770,014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 33, Application US/08446692 Patent No. 5759551 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
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Best Local Similarity
Matches 24; Conserva
                                                                                                                                                                                                                               CLASSIFICATION:
               USA
                                                                                                                                                                                                          FILING DATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-770-014-36
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Pred. No. 3.7e-11;
0; Mismatches 2; Indels
                                        Indels
   85.7%; Pred. No. 3.7e-11;
tive 0; Mismatches 2;
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Patent No. 6559282
GENERAL INFORMATION:
TITLE OF INVENTION: IMMUNOGENS
TITLE OF INVENTION: IMMUNOGENS
TUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
ADDRESSEE: MOTGAN & Finnegan, L.L.P.
STREET: 345 Park Avenue
CITY: New York
                                                                                                                                                                                                                                                                                                                        Sequence 36, Application US/09303323
Fatent No. 6228987
GENERAL INFORMATION:
TITLE OF INVENTION: IMMUNOGENS
TITLE OF INVENTION: IMMUNOGENS
NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
ADDRESSEE: MORGAN & Finnegan, L.L.P.
STREET: 345 Park Avenue
CITY: New York
                                                                                                    3 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
                                                                                                                                         1 LSEIKGVIVHRLEGVGGE--HWSYGLRP 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
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FILING DATE: 30-AF.
FILING DATE: 30-AF.
CLASSIFICATION
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/100,414
FILING DATE: 20-JUNE-1998
ATTONNEY/AGENT INFORMATION:
NAME: MARIA H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-/
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION INFORMATION INFORMATION INFORMATION INFORMATION INFORMATION INFORMATION INFORMATION 
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/303,323
FILING DATE: 30-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PC Windows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC Window
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          72.5%;
85.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 10154-0054
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
      Best Local Similarity 85.79
Matches 24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27 amino acids
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Matches 24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TOPOLOGY: linear MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                amino acid
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US-09-303-323-36
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COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
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                                                                                                                                                                                                                                                                                                                                                                       1151-4146 US2
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COMPUTER: INDA PC COMPALIALE
COMPUTER: Ploppy disk
COMPUTER: INDA PC COMPALIALE
OPERATING SYSTEM: PC Windows
SOFTWARE: Word 97
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/100,414B
FILING DATE: 20-JUNE-1998
CLASSIFICATION: 424
ATTORNETY/AGENT INFORMATION:
NAME: Maria H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-4157
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758 4800
TELEPHONE: 212-751-6849
INFORMATION FOR SEQ. ID NO: SEGUENCE CHARACTERISTICS:
SEGUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: NOVEL LHRH PEPTIDE
TITLE OF INVENTION: IMMUNGENS
NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
ADDRESSE: Morgan & Finnegan, L.L.P.
STREET: 345 Park Avenue
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/229,275
FILING DATE: 14-APR-1994
CLASSIFFCATION: 424
PRIOR APPLICATION HATA:
APPLICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: MARTIA C.H. Lin
REGISTRATION NUMBER: 19,323
REFERENCE/DOCKET NUMBER: 1151-4146 US
TELEPHONE: (212/415-8745
TELEPHONE: (212/415-8745
TELEPHONE: (212/415-8745
TELEPHONE: (516)751-6849
INFORMATION FOR SEQ ID NO: 19:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 36, Application US/09100414B Patent No. 6025468 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        27 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 27 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: peptide
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COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
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APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
NUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS:
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                     COMPOURE: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
SURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/446,692
FILING DATE: 7-JUN-1995
CLASSIFICATION: 42
ATTORNEY/AGENT INFORMATION:
NAME: Maria C.H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-4146 US2
TELECOMMUNICATION: INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IED PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
GURENT APPLICATION NATA:
APPLICATION NUMBER: US/08/488,351A
FILING DATE: 7-010.1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 116; DB 1;
Pred. No. 3.7e-11;
0; Mismatches 2.
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FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 19, Application US/08488351A Patent No. 5843446 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: (516)751-6849
INFORMATION FOR SEQ ID NO: 19:
                                                        SEE: Maria C.H. Lin
: 345 Park Avenue
New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                72.5%;
85.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
CITY: New York
STATE: NY
                                                                                                                                                                                                                     Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 85.73
Matches 24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
LENGTH: 27 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear

MOLECULE TYPE: peptide

US-08-446-692-19
                                                                                                                                                   COUNTRY: US
ZIP: 10154-0053
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 424
PRIOR APPLICATION DATA:
                                          CORRESPONDENCE ADDRESS: ADDRESSEE: Maria C.H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY: US
ZIP: 10154-0053
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                                                     Sequence 20, Application US/08488351A
Patent No. 584346
CENERAL INFORMATION:
CENERAL INFORMATION:
CENERAL INFORMATION:
CENERAL INFORMATION:
CENERAL INFORMATION:
CENERAL CANT:
CENERAL CANT:
CENERAL CANT:
CENERAL CANT:
CENERAL CANT:
CORRESSONDENCE ADDRESS:
CORRESSONDENCE ADDRESS:
ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
CITY: New York
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION DATA:

SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/488,351A
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/446,692
FILING DATE: 7-JUN-1995
CLASSIFICATION DATA:

APPLICATION NUMBER: US 08/229,275
FILING DATE: 14-APR-1994
CLASSIFICATION: 424
PRIOR APPLICATION: 424
PRIOR APPLICATION: 424
PRIOR APPLICATION: 424
APPLICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: MATIA C.H. LÎN
REGISTRATION NUMBER: 1151-4146 US2
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              73.1%; Score 117; DB 2;
82.8%; Pred. No. 4.3e-11;
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                                                                                                                                                                                                                                                                                                                                             Sequence 19, Application US/08446692
Patent No. 575951
GENERAL INFORMATION:
APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEPHONE: (212,415-8745
TELEFAX: (516)751-6849
INFORMATION FOR SEQ ID NO: 20
SEQUENCE CHRACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             42 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Best Local Similarity 82.8
Matches 24; Conservative
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                                   US-08-488-351A-20
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Gaps 5 38, Appl 38, Appl 38, Appl 53, Appl 55, Appl 60, Appl 60, Appl 60, Appl 57, Appl 17, Appl 80, Appl 80,

Sequence Seq

US-09-100-414B-38 US-09-303-323-38 US-09-770-014-38 US-09-770-014-53 US-09-770-014-53 US-09-770-014-60 US-09-770-014-60 US-09-770-014-60 US-09-770-014-57 US-09-770-014-57 US-09-770-014-57 US-08-448-351A-17 US-08-448-351A-17 US-09-100-414B-50 US-09-770-014-50 US-09-770-014-50 US-09-770-014-50 US-09-770-014-50 US-09-100-414B-50 US-09-100-414B-50 US-09-100-414B-50 US-09-100-414B-50 US-09-100-414B-50 US-09-100-414B-50

ALIGNMENTS

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September 24, 2003, 16:46:20; Search time 9.18836 Seconds (without alignments) 142.750 Million cell updates/sec
5.1.6
Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                  Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                             160
1 KLLSEIKGVIVHRLEGVEGPSLHWSYGLRPX
                                                                                                                                                                                                                                                                                                                              328717 seqs, 42310858 residues
   GenCore version
Copyright (c) 1993 - 2003
                                                                             - protein search, using sw model
                                                                                                                                                                                                                                                                       BLOSUM62
Gapop 10.0 , Gapext 0.5
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Maximum DB seq length: 200000000
                                                                                                                                                                                              US-09-848-834A-9
                                                                                                                                                                                                                                                                         Scoring table:
                                                                                                                                                                                              Title:
Perfect score:
                                                                             OM protein
                                                                                                                                                                                                                                   Sequence:
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1: /cgm2_6/ptodata/1/iaa/5A_COMB.pep:*
2: /cgm2_6/ptodata/1/iaa/5B_COMB.pep:*
3: /cgm2_6/ptodata/1/iaa/6A_COMB.pep:*
4: /cgm2_6/ptodata/1/iaa/6B_COMB.pep:*
5: /cgm2_6/ptodata/1/iaa/pcruS_COMB.pep:*
6: /cgm2_6/ptodata/1/iaa/pcruS_COMB.pep:*
6: /cgm2_6/ptodata/1/iaa/pcruS_COMB.pep:*
7: /cgm2_6/ptodata/1/iaa/pcruS_COMB.pep:*

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Issued_Patents_AA:*

Database

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Result		% Query			SUMMARIES		
No.	Score	Match	Match Length	DB	qı	Description	
1	117	73.1	42	-	US-08-446-692-20	Sequence 20, Appl	
7	117	73.1	42	~	US-08-488-351A-20		
m	116	72.5	27	-	US-08-446-692-19	19,	
4	116	72.5	27	N	-488-351	Sequence 19, Appl	
Ŋ	116	72.5	27	m	US-09-100-414B-36	36,	
9	116	72.5	27	m	US-09-303-323-36	36,	
7	116	72.5	27	4	US-09-770-014-36	36,	
80	116	72.5	45	Н	US-08-446-692-33	m	
6	116	72.5	45	7	US-08-488-351A-33	33,	
10	113	70.6	27	m	US-09-100-414B-43	43,	
11	113	70.6	27	e	US-09-303-323-43	43,	
12	113	70.6	27	4	US-09-770-014-43	43,	
13	110	68.8	31	m	US-09-100-414B-55	Ŋ	
14	110	68.8	31	٣	US-09-303-323-55	55,	
15	110	68.8	31	4	US-09-770-014-55	55,	
16	108	67.5	27	m	US-09-100-414B-41	41,	
17	108	67.5	27	e	US-09-100-414B-47	4	
18	108	67.5	27	3	US-09-303-323-41	41,	
19	108	67.5	27	٣	303-323-4	47,	
20	108	67.5	27	4	US-09-770-014-41	41,	
21	108	67.5	27	4	-60-	47,	
22	108	67.5	45	٣	US-09-100-414B-45	4	
23	108	67.5	45	3	-60-	45,	
24	108	67.5	45	4	US-09-770-014-45	45,	
25	107	6.99	31	m	US-09-100-414B-59	59,	
26	107	6.99	31	٣	US-09-303-323-59	29,	
27	107	6.99	31	4	US-09-770-014-59	S	

146-692-20 lence 20. Application US/08446692 lence 20. Application US/08446692 lence 20. Application US/08446692 lence 1 wrocknation: lence 2 wrocknation: lence 3 wrocknation: lence 2 wrocknation: lence 3 wrocknation: lence 2 wrocknation: lence 3 wrocknation: lence 3 wrocknation: lence 4 wrocknation: lence 3 wrocknation: lence 4 wrocknation: lence 2 wrocknation: lence 3 wrocknation: lence 4 wrocknation: lence 3 wrocknation: lence 4 wrocknation: lence 5 wrocknation: lence 5 wrocknation: lence 6 wrocknation: lence 6 wrocknation: lence 7 wrocknation: lence 7 wrocknation: lence 8 wrocknation: lence 8 wrocknation: lence 9 wrocknation: l	for vaccines	/	Gaps 1;
RESOULT Sequence of the second	446-692-20 ence 20, Application th No. 575951 ERAL INFORMATION: PPLICANT: Ladd, Anr PPLICANT: Wang, Che PRESPONDENCES: ORRESPONDENCES: ADDRESSBE: Maria C STREET: 345 Park A STREET: NY	sk 0S/MS-DOS ease #1.0, Version 708/446,692 5 N: N: 9,323 1151-4146 US2 1150: 20:	Ouery Match Duery Match Best Local Similarity 82.8%; Pred. No. 4.38-11; Matches 24; Conservative I. Mismatches 2; Indels 2 LLSEIKGVIVHRLEGVEGPSLHWSYGLRP 30 :



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PEPTIDE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
    Óγ
                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
                                             Science 235:1514-1517(1987).
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES
THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus;
Placenta; Signal; Pyrrolidone carboxylic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GONADOLIBERIN I.
PROLACTIN RELEASE-INHIBITING FACTOR I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PYRROLIDONE CARBOXYLIC ACID.
AMIDATION (G-34 PROVIDE AMIDE GROUP).
494B5C64DA8A3EB3 CRC64;
'Two mammalian genes transcribed from opposite strands of the same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-0CT-1996 (Rel. 34, Created)
01-0CT-1996 (Rel. 34, Last sequence update)
01-0CT-1996 (Rel. 41, Last annotation update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing
hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 57; DB 1; Length 92;
Pred. No. 0.21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROGONADOLIBERIN I.
                                                                                                                                                                -!- TISSUE SPECIFICITY: CENTRAL NERVOUS SYSTEM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        67 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
Pfam; PF00446; GnRH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; M15528; -; NOT_ANNOTATED_CDS.
PIR; A40147; RHRTG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRT;
                                                                                                                                          SUBCELLULAR LOCATION: Secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; M12579; AAA41263.1; -.
EEMBL; M31670; AAA41264.1; -.
EEMBL; M15527; AAA42141.1; ALT_SEQ.
EMBL; M15529; AAA42139.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
TISSUE-Hypothalamus;
MEDLINE-95124501; PubMed-7545971;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Y.J., Costa M.E., Ojeda S.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Macaca mulatta (Rhesus macaque)
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33
10500 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; S50870; AAB24572.1; -. EMBL; M12579; AAA41263.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 35.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ||| | | | ||||||||
LEGCS--SQHWSYGLRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cercopithecinae; Macaca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OR GNRH OR LHRH.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    92 AA;
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P55247;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Fragment)
GNRH1 OR G
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MOD_RES
SEQUENCE
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PEPTIDE
ACT_SITE
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GON1_MACMU
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  RRTH REST NOT THE PRINCE OF TH
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                          macaques.";
Neuroendocrinology 60:346-359(1994).
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES
THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AMIDATION (G-16 PROVIDE AMIDE GROUP) (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROSITE; PSO0473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
"Developmental expression of the genes encoding transforming growth factor alpha and its receptor in the hypothalamus of female rhesus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
ACTIVITY (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ó;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PYRROLIDONE CARBOXYLIC ACID (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 54; DB 1; Length 67;
Pred. No. 0.42;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     505394DAA261A3F2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GONADOLIBERIN I
                                                                                                                                                            -!- SÜBCELLULAR LOCATION: Secreted.
-!- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Search completed: September 24, 2003, 17:41:16 Job time : 5.85346 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Signal, Pyrrolidone carboxylic acid.

NON_TER 1 1 1 SIGNAL <1 5 BY SIMI)
                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00446; GnRH; 1.
PRINTS; PR01541; GONADOLIBRNI.
                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; S75918; AAB33096.1; -. PIR; I78541; I78541.
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90.0%;
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>67
15
>67
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Best Local Similarity
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ACT_SITE
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us-09-848-834a-9.rsp

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EMBL; M14872; AAA37717.1;
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         DR KKW KKW CORRECTED TO SET THE FITTER SO.
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01-JAN'1990 (Rel. 13, Last sequence update)
01-JAN-1990 (Rel. 41, Last annotation update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor (Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing
hormone I) (GnRH I) (Luliberin I); Prolactin release-inhibiting factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-87069928; PubMed-3024317; Mason A.J., Hayflick J.S., Zoeller R.T., Young W.S. III, Mason A.J., Mikolics K., Seeburg P.H.; Young W.S. III, Phillips H.S., Nikolics K., Seeburg P.H.; Machaing the gonadotropin-releasing hormone gene is responsible for hypogonadism in the hpg mouse."; Science 234:1316-1371(1986).

THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATES
                                                                                                                     PRINTS; PRO1541; GONADOLIBRNI.
PROSTER; PRO0473; GNRH; 1.
Cleavage on pair for basic residues; Hormone; Amidation; Hypothalamus; Placenta; Pharmaceutical; Signal; Polymorphism;
Pyrrolidone carboxylic acid.
23 acid.
24 92 PROGONADOLIBERIN I.
PEPTIDE 24 93 GONADOLIBERIN I.
PEPTIDE 37 92 GNRH-ASSOCIATED PEPTIDE I.
ACT_SITE 26 26 APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
GO; GO:0005625; C:soluble fraction; TAS.
GO: GO:0005183; F:luteinizing hormone-releasing factor activity; TAS.
GO; GO:0007267; P:cell-cell signaling; TAS.
GO; GO:000725; P:development; TAS.
GO; GO:0008285; P:negative regulation of cell proliferation; TAS.
GO; GO:00018285; P:negative regulation of cell proliferation; TAS.
InterPro; IPR004071; GRAD.
InterPro; IPR004071; Gnadoliberini.
                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                AMIDATION (G-34 PROVIDE AMIDE GROUP). W -> S (IN dbSNP:6185).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                                                                                                                                                                                                                Score 57.5; DB 1; Length 92; Pred. No. 0.18; 0; Mismatches 2; Indels
                                                                                                                                                                                                                                                       ACTIVITY.
PYRROLIDONE CARBOXYLIC ACID.
                                                                                                                                                                                                                                                                                                          /FTId=VAR_013943.
30A72221B076FA79 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              90 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -!- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
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                                                                                                                                                                                                                                                                                                                       10380 MW;
                                                                                                                                                                                                                                                                                                                                                 35.9%;
80.0%;
                                                                                                                                                                                                                                                                                                                                                                                                     30
                                                                                                                                                                                                                                                                                                                                                                                                                  18 VEGCSSQHWSYGLRP 32
                                                                                                                                                                                                                                                                                                                                                                                                    17 VEG-PSLHWSYGLRP
                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                           Pfam; PF00446; GnRH; 1
                                                                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity
'-has 12; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                       92 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GNRH1 OR GNRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GONI_MOUSE
P13562;
                                                                                                                                                                                                                                                                                                                       SECUENCE
                                                                                                                                                                                                                                                                                MOD_RES
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GON1_MOUSE
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01-APR-1988 (Rel. 07, Created)
01-APR-1988 (Rel. 07, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor (Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GNRH I) (Luliberin I); Prolactin release-inhibiting factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Adelman J.P., Mason A.J., Hayflick J.S., Seeburg P.H.; "Isolation of the gene and hypothalamic cDNA for the common precursor of gonadotropin-releasing hormone and prolactin release-inhibiting factor in human and rat."; Proc. Natl. Acad. Sci. U.S.A. 83:179-183(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                        residues; Hormone; Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                      PROLACTIN RELEASE-INHIBITING FACTOR I. APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                     ACTIVITY.
PYRROLIDONE CARBOXYLIC ACID.
AMIDATION (G-32 PROVIDE AMIDE GROUP).
1C0766FA4826E4D9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Bond C.T., Hayflick J.S., Seeburg P.H., Adelman J.P., The rat gonadotropin-releasing hormone: SH locus: structure and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Maier C.C., Marchetti B., Leboeuf R.D., Blalock J.E.;
"Thymocytes express a mRNA that is identical to hypothalamic
luteinizing hormone-releasing hormone mRNA.";
Cell. Mol. Neurobiol. 12:447-454(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE-Heart;
MEDLINE-87149087; PubMed-3547652;
Adelman J.P., Bond C.T., Douglass J., Herbert E.;
                                                                                                                                                                                                                                              PROGONADOLIBERIN I.
                                                           Inter...
Inter...
InterPro; IPRU040,,,
Pfam; PF00446; GRRH; 1.
PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GRRH; 1.
Cleavage on pair of basic residues; Hormone; Arr Cleavage on pair of basic residues; Hormone; Arr Cleavage on pair of pasic residues; Hormone; Arr Cleavage on pair of pasic residues; Arr Cleavage on pair of pasic residues; Pyrrolidone carboxylic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
0.21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            92 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 57;
Pred. No.
MGD; MGI:9578; RHMSG.
MGD; MGI:95789; Gnrh.
InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Endocrinol, 3:1257-1262(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. MEDLINE-89384661; PubMed=2476669;
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MEDLINE=93105480; PubMed=1468115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=86094338; Pubmed=2867548;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    16 LEGCS--SQHWSYGLRP 30
                                                                                                                                                                                                                                                                                                                                                                                                             10337 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            35.6%;
70.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   14 LEGVEGPSLHWSYGLRP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
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                                                                                                                                                                                                                                         31
24
24
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                                                                                                                                                                                                                                                                                                                                                                                                           90 AA;
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22
35
24
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Matches 12;
                                                                                                                                                                                                                                                                                           PEPTIDE
ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GON1_RAT
P07490:
                                                                                                                                                                                                                                                                                                                                                                                       MOD_RES
SEQUENCE
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sapiens (Human).
                                NCBI_TaxID=9606;
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                                                                                                                                                         MEDLINE-72065376; PubMed-4942726;
Matsuo H., Arimura A., Nair R.M.G., Schally A.V.;
"Synthesis of the porcine LH- and FSH-releasing hormone by the solid-
                                                                                                                                                                                                                                                                                                                                                                                PRINTS; PRO1541; GONADOLIBRNI.
PROSTIE; PS00473; GNRH; 1.
Cleavage on paid basic residues; Hormone; Amidation; Hypothalamus;
Placenta; Signal; Pyrrolidone carboxylic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                            GONADOLIBERIN I.
GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PYRROLIDONE CARBOXYLIC ACID.
AMIDATION (G-34 PROVIDE AMIDE GROUP).
8340474F32DDAA99 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1-JUL-1986 (Rel. 01, Created)
01-ARR-1988 (Rel. 07, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor (Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (GnR I) (Lutionaling in (Lutionaling hormone)
peptide I).
GONAGORELIN; GONAGORELIN; GNRH-associated GNRHI OR GNRH OR LHRH.
                                       Confirmation of the proposed structure by conventional sequential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ÷
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 1; Length 91;
         MEDLINE=72114303; PubMed-4946067;
Baba Y., Matsuo H., Schally A.V.;
"Structure of the porcine LH- and FSH-releasing hormone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8;
                                                  analyses.";
Biochem. Biophys. Res. Commun. 44:459-463(1971).
                                                                                                                                                                                                                                                                                                                                                                                                                                   PROGONADOLIBERIN I.
                                                                                                                                Biochem. Biophys. Res. Commun. 45:822-827(1971).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     No. 0.18;
                                                                                                                                                                                                                               -!- SUBCELLULAR LOCATION: Secreted.
-!- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 KLLSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            57.5;
                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Pred.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10090 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           35.9%;
50.0%;
                                                                                                                                                   SYNTHESIS OF GONADOLIBERIN.
                                                                               SYNTHESIS OF GONADOLIBERIN
                                                                                                                                                                                                                                                                                                                                           EMBL; L32864; AAA31066.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00446; GnRH; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      91 AA;
                                                                                                                      phase method.
                                                                                                                                                                                                                        HORMONES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GON1_HUMAN
P01148;
                                                                                                                                                                                                                                                                                                                                                                                                                                                     PEPTIDE
ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MOD_RES
MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                            PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                          SIGNAL
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GON1_HUMAN
                                                                                                                                                                                                                                                                                                                                                                                                                                   CHAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Characterization of single-nucleotide polymorphisms in coding regions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -I- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE-86094338; PubMed=2867548;
Adelman J.P., Mason A.J., Hayflick J.S., Seeburg P.H.;
Alsolation of the gene and hypothalamic cDNA for the common precursor of gonadotropin-releasing hormone and prolactin release-inhibiting factor in human and rat.";
                                                                                                                                                        SEQUENCE FROM N.A.
MEDLINE-89366682; PubMed-2671939;
Hayflick J.S., Adelman J.P., Seeburg P.H.;
"The complete_nucleotide sequence of the human gonadotropin-releasing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cargill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N., Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L., Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.Q., Lander E.S.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Seeburg P.H., Adelman J.P.; "Characterization of CDNA for precursor of human luteinizing hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBCELLULAR LOCATION: Secreted.
PHARMACEUTICAL: Available under the names Factrel (Ayerst Labs),
Lutrepulse or Lutrelef (Ferring Pharmaceuticals) and Relisorm
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 24-33.

MEDLINE-83126573; PubMed-6760865;
Tan L., Rousseau P.;
The chemical identity of the immunoreactive LHRH-like peptide biosynthesized in the human placenta.";
Biochem. Biophys. Res. Commun. 109:1061-1071(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Proc. Natl. Acad. Sci. U.S.A. 83:179-183(1986).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A., AND VARIANT SER-16.
MEDLINE-85012739; PubMed-6090951;
                                                                                                                                                                                                                                                                                                                                                               Nucleic Acids Res. 17:6403-6403(1989)
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MEDLINE=99318093; PubMed=10391209;
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Nat. Genet, 22:231-238(1999).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        releasing hormone.";
Nature 311:666-668(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genew; HGNC:4419; GNRH1.
MIM; 152760;
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                                                                                                       EMBL; X16566; CAA34568.1; ALT_INIT.
HSSP; P04849; 1SVF.
InterPro; IPR00776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
Glycoprotein; Fusion protein; Transmembrane; Envelope protein; Signal.
SIGNAL
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=Ulster/88;
MEDLINE=92398437; PubMed=1524494;
Curran M.D., Lu Y.J., Rima B.K.;
"The fusion protein gene of phocine distemper virus: nucleotide and deduced amino acid sequences and a comparison of morbillivirus fusion
                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the
                                                                                                                                                                                                                                    LINKAGE BETWEEN F2 & F1 (POTENTIAL).
N-LINKED (GECNAC. ) (POTENTIAL).
N-LINKED (GLCNAC. ) (POTENTIAL).
N-LINKED (GLCNAC. ) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                          01-DEC-1992 (Rel. 24, Created)
01-DEC-1992 (Rel. 24, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein Precursor [Contains: Fusion glycoprotein F2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "The nucleotide sequence and deduced amino acid composition of haemagglutinin and fusion proteins of the morbillivirus phocid
                                                                                                                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Koevamees J., Blixenkrone-Moeller M., Sharma B., Oervell C.,
                                                                                                                                                                                                                                                                                                Score 64; DB 1; Length 529; Pred. No. 0.12;
                                                                                                                                                                                                                                                                                                                    1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Phocine distemper virus (PDV).
Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
                                                                                                                                                                                                         EXTRACELLULAR (POTENTIAL). POTENTIAL.
                                                                                                                                                                                                                                                                             AE987BC9F07E9AA9 CRC64;
                                                                                                                                                                                                                            CYTOPLASMIC (POTENTIAL).
                                                                                                                                                         BY SIMILARITY.
FUSION GLYCOPROTEIN F0.
                                                                                                                                                                                                                                                                                                                                                                                                         631 AA
                                                                                                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                             PROTEIN F2.
PROTEIN F1.
                                                                                                                                                                                                POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        distemper virus.";
J. Gen. Virol. 72:2959-2966(1991)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
STRAIN-ISOlate DK88-4A;
MEDLINE-92113538; PubMed=1765768;
                                                                                                                                                                                                                                                                                                                  ó
                                                                                                                                                              Arch. Virol. 126:159-169(1992).
                                                                                                                                                                                                                                                                                                40.0%;
                                                                                                                                                                                                                                                                                                                                                 EMBL; X16566; CAA34567.1; -.
                                                                                                                                                                                                                                                                                                                                     3 LSEIKGVIVHRLEGV 17
                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                             529 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=11240;
                                                                                                                                                                                                                                                                                                                  14;
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P28886;
FAMILY
                                                                                                                                                                                                         DOMAIN
TRANSMEM
DOMAIN
                                                                                                                                                                            CHAIN
CHAIN
TRANSMEM
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                                                                                                                                                                                                                                     DISULFID
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                                                                                                                                                                                                                                                                   CARBOHYD
                                                                                                                                                                                                                                                                             SEQUENCE
                                                                                                                                                                   CHAIN
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VGLF_PHODV
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HSSP, P04849; ISVF.
InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
Glycoprotein; Fusion protein; Transmembrane; Envelope protein; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                             Curran M.D., Loan D.O., Rima B.K., Kennedy S., "Nucleotide sequence analysis of phocine distemper virus reveals its
                                                                                                                                                                                            -i-SUBDNIT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2 LINKED BY A DISULFIDE BOND.
-i-SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-0CT-1996 (Rel. 34, Created)
01-0CT-1996 (Rel. 34, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
28-FCB-2003 (Rel. 41, Last annotation update)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GRH I) (Luliberin I); GRRH-associated peptide I].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata, Craniata; Vertebrata; Euteleostomi;
Cetartiodactyla; Suina; Suidae; Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LINKAGE BETWEEN F2 & F1 (POTENTIAL).
POTENTIAL.
                                                                                                         distinctness from canine distemper virus.";
Vet. Rec. 127:430-431(1990).
-!- FUNCTION: THIS PROTEIN DIRECTS FUSION OF VIRAL AND CELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-LINKED (GLCNAC. . .) (POTENTIAL)
N-LINKED (GLCNAC. . .) (POTENTIAL)
N-LINKED (GLCNAC. . .) (POTENTIAL)
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Pred. No. 0.14;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TISSUE-Hypothalamus;
Wesner G.D., Matteri R.L., Becker B.A.;
Submitted (MAY-1994) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -> V (IN REF. 2).
D1FC87CDD426E9B8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FUSION GLYCOPROTEIN FO. F2 PROTEIN. F1 PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             91 AA
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                                          MEDLINE=91089508; PubMed=2264246;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             68873 MW;
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80.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; D10371; BAA01206.1; -.
PIR; A48346; A48346.
PIR; JQ1368; VGNZPD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           369 LSEVKGVVVHRLEAV 383
SEQUENCE OF 95-631 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3 LSEIKGVIVHRLEGV 17
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Eukaryota; Metazoa;
Mammalia; Eutheria;
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89
194
110
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63
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Matches 12; Conserv
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P49921;
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                                                                                                           InterPro; ISVF.
InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
Glycoprotein; Fusion protein; Transmembrane; Envelope protein; Signal.
SIGNAL
20 546
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
MEDLINE-88129050; PubMed=3433924;
Barrett T., Clarke D.K., Evans S.A., Rima B.K.;
"The nucleotide sequence of the gene encoding the F protein of canine distemper virus: a comparison of the deduced amino acid sequence with
                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SUBUNIT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2 LINKED BY A DISULFIDE BOND. SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN
                                                                                                                                                                                                                                                                             ARG/LYS-RICH (BASIC).
LINKAGE BETWEEN F2 & F1 (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VGLF_CDVO STANDARD; PRT; 662 AA.
P12569, 065991;
01-0CT-1989 (Rel. 12, Last sequence update)
16-0CT-2001 (Rel. 40, Last annotation update)
Fusion 91ycoprotein Precursor [Contains: Fusion 91ycoprotein F2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -!- FUNCTION: THIS PROTEIN DIRECTS FUSION OF VIRAL AND CELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                    ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Wild T.F., Bernard A., Spehner D., Villeval D., Drillien R.; "Vaccination of mice against canine distemper virus-induced encephalitis with vaccinia virus recombinants encoding measles canine distemper virus antigens.";
                                                                                                                                                                                                                                                                                                                                                                                       40.6%; Score 65; DB 1; Length 546; 86.7%; Pred. No. 0.086;
                                                                                                                                                                                                                                                                                                                                                                                                                    1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Canine distemper virus (strain Onderstepoort) (CDV). Viruses; ssRNA negative-strand viruses; Mononegavirales; Paramyxoviridae; Paramyxoviridae; Paramyxovirinae; Morbillivirus.
                                                                                                                                                                                                                                                                                                                     N-LINKED (GLCNAC. . .) (PC N-LINKED (GLCNAC. . .) (PC N-LINKED (GLCNAC. . .) (PC 476D74DCC18BCFCF CRC64;
                                                                                                                                                                                                        F2 PROTEIN.
F1 PROTEIN.
ARG-RICH (BASIC).
                                                                                                                                                                                                                                                                                                                                                                                                                 1; Mismatches
                                                                                                                                                                                                                                                   POTENTIAL. POTENTIAL.
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MEDLINE=93227696; PubMed=8470428;
                                                                                                                                                                                                                                                                                                                                                               58662 MW;
                                                                                                EMBL; M21514; AAA47400.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            3 LSEIKGVIVHRLEGV 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             other paramyxoviruses.";
Virus Res. 8:373-386(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                 13; Conservative
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108
108
108
133
513
517
51
57
518
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                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
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CARBOHYD
CARBOHYD
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                                                                                                                                                                                                      EMBL; M21849; AAA42878.1; -.
EMBL; X65509; CAA46481.1; -.
PIR; 36321; VGNZCD.
PIR; 521382; S21382.
HSSP; P04849; 1SVF.
InterPro; IPR000776; Fusion_gly.
InterPro; IPR0523; fusion_gly: 1.
Stoprotein; Fusion protein; Transmembrane; Envelope protein; Signal. SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (POTENTIAL).
(POTENTIAL).
(POTENTIAL).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-WAY-1992 (Rel. 22, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein precursor [Contains: Fusion glycoprotein F2;
Fusion glycoprotein F1].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
MEDILINE-92263801; Pubmed=1585658;
Schnid A., Spielhofer P., Cattaneo R., Baczko K., Ter Meulen V.,
Billeter M.A.;
"Subacute sclerosing panencephalitis is typically characterized la alterations in the fusion protein cytoplasmic domain of the persisting measles virus.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -! - FUNCTION: THIS PROTEIN DIRECTS FUSION OF VIRAL AND CELLULAR
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0
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11237;
                                                                                                                                                                                                                                                                                                                                                                                                                                      FUSION GLYCOPROTEIN FO.
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N-LINKED (GLCNAC. ...
N-LINKED (GLCNAC. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POTENTIAL.
LINKAGE BETWEEN F2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 0.1;
1; Mismatches
                                                                                                                                                                 or send an email to license@isb-sib.ch).
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PROTEIN F1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 65;
Pred. No. (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             174 A
662 L
72970 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VGLF_MEASI STANDARD; F
P26011, 083298;
01-MAY-1992 (Rel. 22, Created)
01-MAY-1992 (Rel. 22, Last sequ
16-0CT-2001 (Rel. 40, Last anno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 40.68;
86.78;
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606
180
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173
173
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CARBOHYD
CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TRANSMEM
DISULFID
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                                                                                                                                                                                                                      SUBUNIT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2 LINKED BY A DISULFIDE BOND. SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN
SEQUENCE FROM N.A.
MEDLINE-95088609; Pubmed=7996154;
Evans S.A., Baron M.D., Chamberlain R.W., Goatley L., Barrett T.;
Fund S.A., Baron M.D., Champerlain R.W., Goatley L., Barrett T.;
Nucleotide sequence comparisons of the fusion protein gene from
virulent and attenuated strains of rinderpest virus.";
J. Gen. Virol. 75:3611-3617(1994).
-:- FUNCTION: THIS PROTEIN DIRECTS FUSION OF VIRAL AND CELLULAR
MEMBRANES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
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MEDLINE=88219541; PubMed=3285575;
TSUKIYama K., Yoshikawa Y., Yamanouchi K.;
"Fusion glycoprotein (F) of rinderpest virus: entire nucleotide sequence of the F mRMA, and several features of the F protein."; Virology 164:523-530(1988).
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LINKAGE BETWEEN F2 & F1 (POTENTIAL)
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Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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F1 PROTEIN.
ARG/LYS-RICH (BASIC).
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01-JUL-1989 (Rel. 11, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
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EMBL; 230697; CAA83181.1; -.
PIR; 547305; 547305.
HSSP; P04849; ISVF
InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
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            SUBUNIT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2 LINKED BY A DISULFIDE BOND.
SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN PAMILY.
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LINKAGE BETWEEN F2 & F1 (POTENTIAL)
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16-OCT-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein precursor [Contains: Fusion glycoprotein F2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Virology 166:149-153(1988).
-!- FUNCTION: THIS PROTEIN DIRECTS FUSION OF VIRAL AND CELLULAR
FUNCTION: THIS PROTEIN DIRECTS FUSION OF VIRAL AND CELLULAR
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Pred. No. 0.061;
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Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11242;
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HSSP; PO4849; LSVF.
INTEXPRO; IPRO00776; FUSION_91y.
Pfam; PF00523; fusion_91y; 1.
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Measles virus (strain Philadelphia-26) (Subacute sclerose
panencephalitis virus), and
Measles virus (strain Edmonston B) (Subacute sclerose panencephalitis
                                                                                                                                                                                                                                                                                           STRAIN=Edmonston;
MEDLINE=87071668; PubMed=3788062;
Richardson C.D., Hull D., Greer P., Hasel K., Berkovich A.,
Richardson C.D., Hull D., Rima B., Lazzarini R.A.;

"The nucleotide sequence of the mRNA encoding the fusion protein of measles virus (Edmonston strain): a comparison of fusion proteins (from several different paramyxoviruses.";
Virology 155:508-523(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN-Philadelphia-26, MEDLINE=94303181; PubMed=8030232; MEDLINE=94303181; PubMed=8030232; Hummel K.B., Vanchiere J.A., Bellini W.J.; "Restriction of fusion protein mRNA as a mechanism of measles virus
                                                                             Measles virus (strain Edmonston) (Subacute sclerose panencephalitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cattaneo R., Schmid A., Spielhofer P., Kaelin K., Baczko K.,
Meulen V., Pardowitz J., Flanagan S., Rima B.K., Udem S.A.;
"Mutated and hypermutated genes of persistent measles viruses which
caused lethal human brain diseases.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Subacute sclerosing panencephalitis is typically characterized by alterations in the fusion protein cytoplasmic domain of the persisting measles virus.";
Virology 188:910-915(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                               Buckland R., Gerald C., Barker R., Wild T.F., Frishon glycoprotein of measles virus: nucleotide sequence of the gene and comparison with other paramyxoviruses.";
J. Gen. Virol. 68:1695-1703(1987).
01-AUG-1988 (Rel. 08, Created)
01-AUG-1988 (Rel. 08, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein precursor [Contains: Fusion glycoprotein F1].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Schmid A., Spielhofer P., Cattaneo R., Baczko K., Ter Meulen V.,
                                                                                                   Measles virus (strain Halle) (Subacute sclerose panencephalitis
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                                                                                                                                                                                                                                            Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBI_TaxID-11235, 11236, 70147, 70149, 70148, 70146;
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MEDLINE=90085790; PubMed=2596022;
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Virus Res. 31:317-330(1994).
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Fusion protein; Transmembrane; Envelope protein; Signal.
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                                                                                                                                                            SUBUNIT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2
                                                                                                                                                                             LINKED BY A DISULFIDE BOND.
-1- SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CYTOPLASMIC (POTENTIAL).
LINKAGE BETWEEN F2 & F1 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
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16-CCT-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein precursor [Contains: Fusion glycoprotein F2;
Fusion glycoprotein F1].
                                                                          Billeter M.A.; Submitted (OCT-1995) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ..
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0.0082;
hes 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Rinderpest virus (strain RBOK) (RDV).
Viruses; ssRNA negative-strand viruses; Mononegavirales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL.
EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      7AA4F1CA82169093 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FUSION GLYCOPROTEIN FO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Paramyxoviridae; Paramyxovirinae; Morbillivirus
NCBI_TaxID=36409;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   546 AA
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BEBL; U03650; AAA56649.1; ALT_INIT.
BEBL; U03670; AAA5660.1; ALT_INIT.
EMBL; U08416; AAA50550.1; ALT_INIT.
EMBL; 266517; CAA91367.1; ALT_INIT.
ENBL; 266517; CAA91368.1; TINIT.
ENBL; 266517; CAA91368.1; TINIT.
                                                                                                                                                                                                                                                                                                                                                                                                               EMBL, M14915; AAA46423.1; --
EMBL, XO5597; CAA29090.1; ALT_INIT.
EMBL, K01711; AAA75498.1; ALT_INIT.
EMBL, K01711; AAA75498.1; --
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01-FEB-1995 (Rel. 31, Last sequ
16-OCT-2001 (Rel. 40, Last anno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      59532 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 288 LSEIKGVIVHRLEGV 302
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               45.0%;
Virology 202:665-672(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LSEIKGVIVHRLEGV 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STANDARD;
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                                     SEQUENCE FROM N.A. STRAIN=Edmonston B;
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SIGNAL
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P41356;
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DOMAIN
TRANSMEM
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DISULFID
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VGLF_RINDR
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TRANSMEM
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                                                                                                                                            virus).
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                            RESULT 3
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HSSP; P04849; LSVE.
InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
Glycoprotein; Fusion protein; Transmembrane; Envelope protein; Signal.sIGNAL
                            Gaps
                                                                                                                                                                                                                                                                                                                              MEMBRANES.
-!- SUBUNT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2 LINKED BY A DISULFIDE BOND.
-!- SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN FAMILY.
                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.

MEDLINE-95088609; PubMed=7996154;

Evans S.A., Barron M.D., Chamberlain R.W., Goatley L., Barrett T.;

"Nucleotide sequence comparisons of the fusion protein gene from virulent and attenuated strains of rinderpest virus.";

J. Gen. Virol. 75:3611-3617(1994).

-: FUNCTION: THIS PROTEIN DIRECTS FUSION OF VIRAL AND CELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ARG/LYS-RICH (BASIC).
LINKAGE BETWEEN F2 & F1 (POTENTIAL).
                                                                                                                                        01-FEB-1995 (Rel. 31, Created)
01-FEB-1995 (Rel. 40, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein Precursor [Contains: Fusion glycoprotein F2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
O-LINKED (POTENTIAL).
                            ó
       Length 534;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  45.0%; Score 72; DB 1; Length 546; 100.0%; Pred. No. 0.0081; ive 0; Mismatches 0; Indels
                            0; Indels
                                                                                                                                                                                                     Rinderpest virus (strain RBT1) (RDV).
Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=39007;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               38B539B89344F401 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             F2 PROTEIN.
F1 PROTEIN.
ARG/LYS-RICH (BASIC).
      DB 1;
      Score 72; DB 3; Pred. No. 0.00 0; Mismatches
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                                                                                                                    PRT;
45.0%; Scor.
100.0%; Pre
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100.0%; Pre
0;
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                                                          288 LSEIKGVIVHRLEGV 302
                                                3 LSEIKGVIVHRLEGV 17
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               Local Similarity 100.
                                                                                                                     STANDARD;
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108
546
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518
546 AA;
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                                                                                                                     RINDB
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TRANSMEM
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       Query Match
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DOMAIN
                                                                                                                     VGLF_RI
P41360;
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Matches
                                                                                                            VGLF_RINDB
                           Matches
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Gaps

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3 LSEIKGVIVHRLEGV 17

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Glycoprotein; Fusion protein; Transmembrane; Envelope protein; Signal.
SIGNAL 1
                                                                                                                                                                                                                                                                                                                                                                                      of
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -!- SUBUNTT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2 LINKED BY A DISULFIDE BOND.
-!- SIMILARITY: BELONGS TO THE PARAMXXOVIRUSES FUSION GLYCOPROTEIN FAMILY.
                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

MOBILINE-3227570; Pubmed-8470368;

MOTI T., Sasaki K., Hashimoto H., Makino S.;

Molecular cloning and complete nucleotide sequence of genomic RNA
"Molecular cloning of attenuated measles virus.";

Virus Genes 7:67-81(1993).

-i. FUNCTION: THIS PROTEIN DIRECTS FUSION OF VIRAL AND CELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LINKAGE BETWEEN F2 & F1 (POTENTIAL).
VGLF_MEASA STANDARD; PRT; 550 AA.
pss973, 01-JUN-1994 (Rel. 29, Created)
01-JUN-1994 (Rel. 29, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein precursor [Contains: Fusion glycoprotein F2;
                                                                                                                                                                                Measles virus (strain AIK-C) (Subacute sclerose panencephalitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   N-LINKED (GLCNAC. . .) (POTENTIAL)
N-LINKED (GLCNAC. . .) (POTENTIAL)
N-LINKED (GLCNAC. . .) (POTENTIAL)
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Pred. No. 0.0082;
                                                                                                                                                                                                                             Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBI_TaxID=36408;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 0; Indels
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PROTEIN F1.
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HSSP; P04849; ISVF.
InterPro; IPR000776; Fusion_9ly.
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59540 MW;
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Matches 15; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEMBRANES
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P08300;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 4
VGLF_MEASE
ID VGLF_ME
AC P08300;
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GenCore version 5.1.6
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OM protein - protein search, using sw model

September 24, 2003, 17:00:31; Search time 5.75346 Seconds (without alignments) 253.383 Million cell updates/sec Run on:

US-09-848-834A-9 160 1 KLLSEIKGVIVHRLEGVEGPSLHWSYGLRPX 31 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

127863 seqs, 47026705 residues Searched:

127863 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_41:* Database : Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	P26032 measles vir	rinderpe	P35973 measles vir	P08300 measles vir				-	measles	P28886 phocine dis	P49921 sus scrofa	P01148 homo sapien	P13562 mus musculu	P07490 rattus norv	-		-	009163 mesocricetu		Q95335 tupaia glis	_		_	•	084546 chlamydia t			-	P51918 haplochromi	P70074 pagrus majo	٠.	P55089 homo sapien	Q8ynw5 anabaena sp
SUMMARIES	ID	VGLF_MEASY	VGLF_RINDB	VGLF_MEASA	VGLF_MEASE	VGLF_RINDR	VGLF_RINDL	VGLF_RINDK	VGLF_CDVO	VGLF_MEASI	VGLF_PHODV	GON1_PIG	GON1_HUMAN	GON1_MOUSE	GON1_RAT	GON1_MACMU	VGLG_IHNV	GON1_SHEEP	GON1_MESAU	GON1_XENLA	GON1_TUPGB	PURK_BACSU	GON1_CAVPO	GON1_DICLA	CX41_THUOB	SYD_CHLTR	GON1_MORSA	GON1_ALLMI	GON1_CHICK	GON1_HAPBU	GON1_PAGMA	GON1_SPAAU	UCN1_HUMAN	DFA1_ANASP
	DB	;	7	Н	7	Н	-	~	Н	Н	Н	-	-	-	-	٦	Н	-	7		Н		-	-	Н.	-1	~1	Н	П	٦	-	-1	-	-
	Query Match Length	534	546	550	550	546	246	546	662	529	631	91	92	90	92	29	208	61	63	83	92	379	92	66	169	582	95	10	92	94	95	95	124	576
dł	Query Match	45.0	45.0		5.									32.6										31.6					30.0	30.0	30.0	30.0	30.0	30.0
	Score	72	72	72	72	71	99	65	65	64	64	57.5	57.5	57	57	54	53	52	52	52	52	52	50.5	50.5	49	64	48.5	48	48	48	48	48	48	48
	Result No.	1	2	m	4	S	9	7	æ	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	53	30	31	32	33

	P95651 rhodobacter Q55393 synechocyst O820c0 anabaena sp		P96769 actinobacil P12605 human parai		O59264 pyrococcus
UCN1_MOUSE HEMF_RHOSH	HEMN_RHOSH DFA1_SYNY3 DFA2_ANASP	TER2_ECOLI RF1_PYRAB	YHBJ_ACTAC VGLF_PI1HC	GSH1_ONCVO DCUP_AQUAE	RF1_PYRHO
	-				П
122	452 573 579	207	110 555	652 338	417
29.4	29.4 29.4	29.1	28.7	28.7	28.4
47	44 47 47	46.5	46 46	46 45.5	45.5
34 35	36 37 38	39	41	43	45

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C; Superfamily: parainfluenza virus cell fusion protein (c) Superfamily: parainfluenza virus cell fusion; transmembrane protein (c) Keywords: glycoprotein; membrane fusion; transmembrane protein (c) 1-188/Product: cell fusion glycoprotein (c) #status predicted (FP2) (c) 194-61/Product: cell fusion glycoprotein (c) #status predicted (FP1) (c) 194-219/Domain: transmembrane #status predicted (FM2) (c) 555/Domain: transmembrane #status predicted (FM3) (c) 184-219/Domain: transmembrane #status predicted (FM3) (c) 182/Binding site: carbohydrate (Asn) (covalent) #status predicted
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                                                                                                                                                                                                                                                                                                                                 Query Match
40.0%; Score 64; DB 1; Length 631;
Best Local Similarity 80.0%; Pred. No. 0.52;
Matches 12; Conservative 2; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Search completed: September 24, 2003, 17:49:29 Job time : 11.9058 secs
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|||:||:||:|||| |
369 LSEVKGVVVHRLEAV 383
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Gaps

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Indels

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C;Accession: A48346
R;Curran, M.D.; Lu, Y.J.; Rima, B.K.
Arch. Virol. 126, 159-169, 1199-
A;Title: The fusion protein gene of phocine distemper virus: nucleotide and deduced a A;Reference number: A48346; MUID:92398437; PMID:1524494
                                    Riwild, T.F.; Bernard, A.; Spehner, D.; Villeval, D.; Drillien, R. submitted to the EMBL Data Library, April 1992
A; Description: Vaccination of mice against canine distemper virus induced encephalitian; Reference number: $21382
A; Reference number: $21382
A; Status: preliminary
A; Mocession: Drillinary
A; Residues: 1-662
A; Residues: 1-662
A; Cross-references: EMBL:X65509; NID:958853; PIDN:CAA46481.1; PID:958854
C; Superfamily: parainfluenza virus cell fusion protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C; Accession: JQ1368
R; Koevamees, J.; Blixenkrone-Moeller, M.; Sharma, B.; Oervell, C.; Norrby, E.
J. Gen. Virol. 72, 2959-2966, 1991
A; Title: The nucleotide sequence and deduced amino acid composition of the haemagglut A; Reference number: JQ1368; MUID:92113538; PMID:1765768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               C; Keywords: glycoprotein; membrane fusion; transmembrane protein (c; Keywords: glycoprotein; membrane fusion; transmembrane estatus predicted <FP2> F: 1-188/Product: cell fusion glycoprotein F2 #status predicted <FP2> F: 89-106/Domain: transmembrane #status predicted <TML> F: 189-103/Region: cleavage processing #status predicted <FP1> F: 189-103/Region: cell fusion glycoprotein F1 #status predicted <FP1> F: 194-631/Product: cell fusion glycoprotein F1 #status predicted <FP1> F: 595-595/Domain: transmembrane #status predicted <TM3> F: 575-595/Domain: transmembrane #status predicted <TM3> F: 110,142,148,486/Binding site: carbohydrate (Asn) (covalent) #status predicted
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cell fusion glycoprotein precursor - phocine distemper virus
N;Contains: fusion protein F1; fusion protein F2 .
C;Species: phocine distemper virus
C;Species: 30-Sep-1992 #sequence_revision 30-Sep-1992 #text_change 25-Oct-1996
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C;Genetics:
A;Gene: F
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0.39;
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Pred. No. 0.39;
1; Mismatches
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; Mismatches
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80.0%;
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86.78;
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|LSEVKGVVVHRLEAV 383
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Best Local Similarity 86.7
Matches 13; Conservative
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A; Residues: 1-631 <KOV>
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Best Local Similarity
Matches 12; Conserv
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A; Residues: 1-631 <CUR>
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                   C; Accession: S21382
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N.Contains: fusion protein F1; fusion protein F2
C; Species: canine distemper virus
C; Date: 30-Jun-1991 #sequence_revision 30-Jun-1991 #text_change 16-Jul-1999
C; Accession: JS0321
R; Barrett, T; Clark, D.K.; Evans, S.A.; Rima, B.K.
Virus Res. 8, 373-386, 1987
A; Title: The nucleotide sequence of the gene encoding the F protein of canine distemper A; Reference number: JS0321; MUD: 88129050; PMID: 3433924
A; Recession: JS0321
A; Molecule type: mRNA
A; Accession: JS0321
A; Molecule type: mRNA
A; Cross references: GB:M21849; NID: G323241; PIDN: AAA42878.1; PID: G323242
C; Genetics:
A; Cors references: GB:M21849; NID: G323241; PIDN: AAA42878.1; PID: G323242
C; Genetics:
C; Superfamly: parainfluenza virus cell fusion protein
C; Keywords: glycoprotein; membrane fusion; transmembrane predicted <SIC>
F; 136-224/Product: cell fusion glycoprotein F2 #status predicted <FIP>
F; 225-662/Product: cell fusion glycoprotein F2 #status predicted <FIP>
F; 66-629/Domain: transmembrane #status predicted <MEN>
F; 66-629/Domain: transmembrane #status predicted <ARN)
F; 62,141,173,179,517/Binding site: carbohydrate (Asn) (covalent) #status predicted
C; Date: 14-Jul-1994 #sequence_revision 14-Jul-1994 #text_change 24-Nov-1999 C; Accession: JQ2223 R; Visser, I.K.G.; van der Heijden, R.W.J.; van de Bildt, M.W.G.; Kenter, M.J.H.; Oervell J, Gen. Virol. 74, 1989-1994, 1993 A; Title: Fusion protein gene nucleotide sequence similarities, shared antigenic sites an e virus entity.
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C;Species: canine distemper virus
C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 24-Nov-1999
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                                                                                                                                                            e Virus entity.

A. Reference number: JQ2223; MUID:93389459; PMID:8376973

A. Molecule type: mRNA

A. Residues: 1-542 <VIS>
A. Mote: the authors translated the codon ATC for residue 4 as Leu C: Comment: This fusion protein F0 is cleaved into F1 and F2 chains.
C: Genetics: F

C: Seperfamily: parainfluenza virus cell fusion protein C: Keywords: glycoprotein: membrane fusion; transmembrane protein F: 1-15/Domain: signal sequence #status predicted <SIG>
F: 16-542/Product: F2 chain #status predicted <FIC>
F: 16-99/Product: F2 chain #status predicted <FIC>
F: 105-135/Region: hydrophobin: F2 thain #status predicted <FIC>
F: 105-135/Region: transmembrane #status predicted <FIM>
F: 21,53,59,397/Binding site: carbohydrate (Asn) (covalent) #status predic
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Pred. No. 0.39;
1; Mismatches 1; Indels
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Pred. No. 0.32;
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1; Mismatches
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86.7%;
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Best Local Similarity 86.7
Matches 13; Conservative
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Best Local Similarity 86.7
Matches 13; Conservative
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S47034
cell fusion protein precursor - porpoise morbillivirus
NiAlternate names: F protein
C;Species: porpoise morbillivirus
C;Species: porpoise morbillivirus
C;Species: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 24-Nov-1999
C;Accession: S47034
R;Bolt, G; Gottschalck, E.; Blixenkkrone-Moeller, M.; Wishaupt, R.G.A.; Welsh, M.=.; submitted to the EMBL Data Library, July 1994
A;Description: Nucleotide sequence comparisons of the F and M genes of cetacean mocbi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             cell fusion glycoprotein precursor - rinderpest virus (strain L)
N;Contains: fusion glycoprotein F1; fusion glycoprotein F2
C;Species: rinderpest virus
C;Date: 30-Sep-1989 #sequence_revision 30-Sep-1989 #text_change 16-Jul-1999
C;Accession: A28921
R;Tsukiyama, K.; Yoshikawa, Y.; Yamanouchi, K.
Virology 164, 523-530, 1988
A;Title: Fusion glycoprotein (F) of rinderpest virus: entire nucleotide sequence can appear to the composition of the compositi
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A;Accession: $47034
A;Molecule type: mRNA
A;Residues: 1-552 <BOL>
A;Cross-references: EMBL:X80757; NID:g520639; PIDN:CAA56731.1; PID:g520640
A;Experimental source: isolate Ulster 88
A;Note: the source is designated as Cetacean morbillivirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
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cell fusion protein F0 precursor - phocine distemper virus N;Contains: F1 and F2 chains
C;Species: phocine distemper virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C;Superfamily: parainfluenza virus cell fusion protein F;1-25/Domain: signal sequence #status predicted <SIG>F;26-552/Product: fusion protein #status predicted <MAT>
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Pred. No. 0.2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 290 LSEVKGVIVHRLEAV-----SYNL 308
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 LSEIKGVIVHRLEGVEGPSLHWSYGL 28
       284 LSEIKGVIIHRLEGV 298
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Best Local Similarity 61.5
Matches 16; Conservative
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A;Molecule type: mRNA
A;Residues: 1-546 <TSU>
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C;Species: rinderpest virus
C;Date: 20-Oct-1994 #sequence_revision 08-Sep-1995 #text_change 20-Sep-1999
C;Accession: 847301
S;Baron, M.D.; Barrett, T.
Submitted to the EMBL Data Library, March 1994
A;Reference number: 847283
A;Accession: 847305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N; Contains: fusion glycoprotein F1; fusion glycoprotein F2 C; Species: rinderpest virus (strain Kabete O) C; Species: rinderpest virus C; Species: rinderpest virus C; Species: rinderpest virus C; Species: rinderpest virus C; Accession: A31051 R; Hsu, D.; Yamanaka, M.; Miller, J.; Dale, B.; Grubman, M.; Yilma, T. Virology 166, 149-153, 1988 A; Title: Cloning of the fusion gene of rinderpest virus: comparative sequence analysis v A; Accession: A31051 MulD:88322864; PMID:3413983 A; Molecule type: genomic RNA A; Residues: 1-546 <HSU> C; Genetics:
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A; Residues: 1-546 < GAR>
A; Cross-references: EMBL:230697; NID:9535396; PIDN:CAA83181.1; PID:9535401; EMBL:230700;
C; Superfamily: parainfluenza virus cell fusion protein
C; Keywords: transmembrane protein
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C;Superfamily: parainfluenza virus cell fusion protein
C;Superfamily: parainfluenza virus cell fusion; transmembrane protein
C;Keywords: glycoprotein; membrane fusion; transmembrane protein
F;1.19/Domain: signal sequence #status predicted <SIG>
F;20-108/Product: cell fusion glycoprotein F2 #status predicted <FF1>
F;109-546/Product: cell fusion glycoprotein F1 #status predicted <FF2>
F;109-134/Domain: transmembrane #status predicted <TN1>
F;401-513/Domain: transmembrane #status predicted <TN2>
F;25,57,63,518/Binding site: carbohydrate (Asn) (covalent) #status predicted
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C;Keywords: glycoprotein; membrane fusion; transmembrane protein F;1-25/Domain: signal sequence #status predicted <SIG> F;25/Domain: signal sequence #status predicted <SIG> F;26-110/Product: cell fusion glycoprotein F2 #status predicted <FF2> F;111-553/Product: cell fusion glycoprotein F1 #status predicted <FF1> F;501-517/Domain: transmembrane #status predicted <TMN> F;32,64,70/Binding site: carbohydrate (Asn) (covalent) #status predicted
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Pred. No. 0.046;
1; Mismatches 0; Indels
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                                                                                                                                                                                                                                                             DB 1; Length 553;
0.033;
                                                                                                                                                                                                                                                                                                                                     0; Indels
                                                                                                                                                                                                                                                                                                                                     0; Mismatches
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                                                                                                                                                                                                                                                             45.0%; Score 72;
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Best Local Similarity 93.3%;
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                 3 LSEIKGVIVHRLEGV 17
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es 15; Conserv
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Best Local Similarity 100.
Matches 15; Conservative
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A; Residues: 272-553 <SCH2>
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General Protein - rinderpest virus

G:Species: rinderpest virus

G:Species: rinderpest virus

C;Species: Notan-1995 #sequence_revision 06-Jan-1995 #text_change 15-Oct-1999

C;Accession: $47300; P00865

C;Accession: $47300; P00865

R:Evans, S.A.; Baron, M.D.; Chamberlain, R.W.; Goatley, L.; Barrett, T.

Submitted to the EMBL Data Library, March 1994

A;Reference number: $47299

A;Reference number: $47300

A;Reference number: $17299

A;Residues: 1-546 <-EVAD.

A;Residues: 1-546 <-EVAD.

A;Cross-references: EMBL:231656; NID:9535406; PIDN:CAA83482.1; PID:9535407

A;Cross-references: EMBL:231656; NID:9535406; PIDN:CAA83482.1; PID:9535407

A;Cross-reference of different lineages of rinderpest virus reflecting their geographic A;Reference number: PQ0865; MUID:94103786; PMID:8277286

A;Reference number: PQ0865; MUID:94103786; PMID:8277286
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C;Superfamily: parainfluenza virus cell fusion protein
C;Keywords: glycoprotein; membrane fusion; transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                  Score 72; DB 1; Length 534;
Pred. No. 0.032;
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Pred. No. 0.033;
0; Mismatches (
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A; Residues: 86-191 <CHA>
C; Genetics:
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RESULT 5

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cell fination glycoprotein precursor - measles vitus (strain AKFC)
CSpecies: measles vitus
ANTHIELE: MOLECULE : cloning and complete nucleotide sequence of genomic RNA of the AIX
ANTHIELE: MOLECULE: cloning and complete nucleotide sequence of genomic RNA of the AIX
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ANTHIELE: SOG AND
ANTHIELE: A
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OM protein - protein search, using sw model

Run on:

September 24, 2003, 17:30:06; Search time 10.9058 Seconds (without alignments) 273.361 Million cell updates/sec

US-09-848-834A-9 160

1 KLLSEIKGVIVHRLEGVEGPSLHWSYGLRPX 31 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283308 seqs, 96168682 residues Searched:

283308 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

PIR_76:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

uc	on glycop			ຕາ	on glycop				on protei								erin prec			otein - r	erin prec	coprotein	•	•	erin prec	bosylamin	tetR-fami	cal prote
Description	cell fusion			gene F pro		cell fusion	cell fusion	41		cell fusion	cell fusion	cell fusion			cell fusion	cell fusion	gonadoliberin	gonadoliberin	gonadoliberin prec	gene F protein	gonadoliberin prec	spike qlycoprotein	gonadoliberin	gonadoliberin	qonadoliberin prec	phosphoril	probable tetR-fami	hypothetical prote
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ID	PQ0376	PQ0388	JU0274	S47300	E48556	VGNZMV	VGNZRK	S47305	S47034	VGNZRL	JQ2223	VGNZCD	S21382	VGNZPD	A48346	S55386	RHHUG	RHMSG	RHRTG	S47299	178541	VGVNFR	RHPGG	RHSHG	151423	DCBSPK	T37168	T23151
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Best Local Similarity

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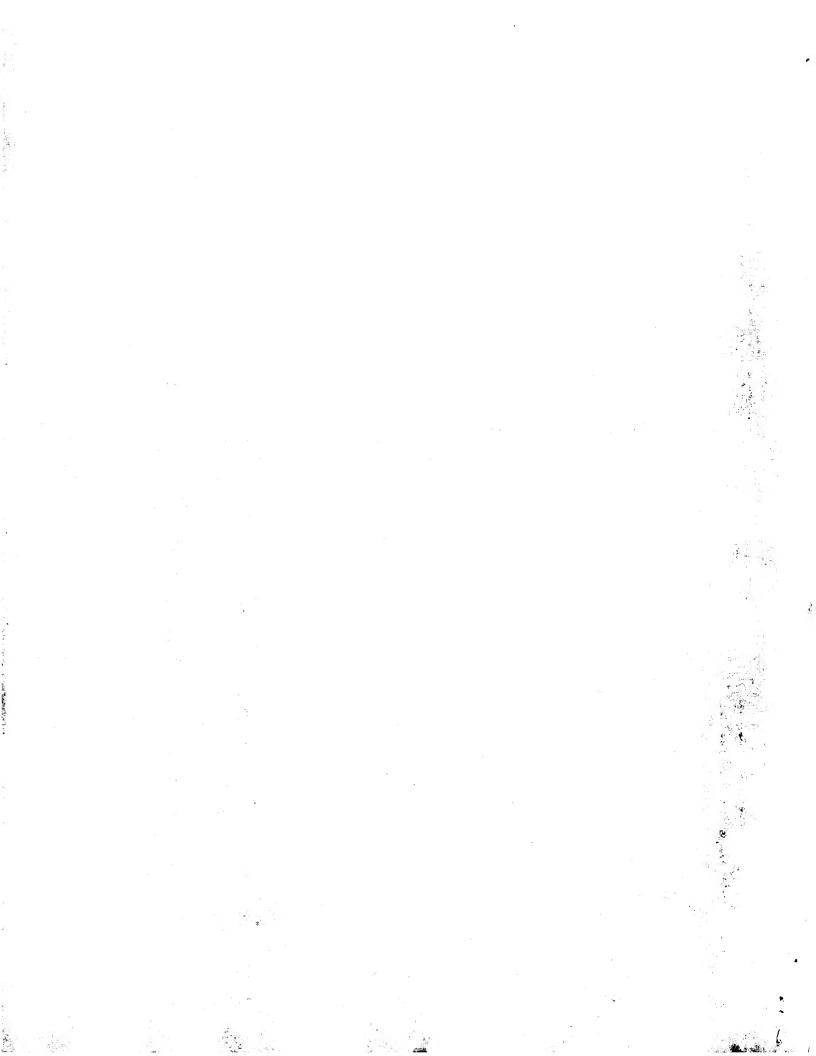
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cell fusion glycoprotein - measles virus (strain Schwarz vaccine) (fragment)
c; species: measles virus
c; species: measles virus
c; paccession: p00388
R; Schulz, T.F.; Hoad, J.G.; Whitby, D.; Tizard, E.J.; Dillon, M.J.; Weiss, R.A.
J. Gen. Virol. 73, 1581-1586, 1992
A; Title: A measles virus isolate from a child with Kawasaki disease: sequence compact A; Reference number: PQ0374; MUID:92300360; PMID:1607874
A; Molecule type: genomic RNA
A; Residues: 1-282 <SCH>
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C;Superfamily: parainfluenza virus cell fusion protein
C;Keywords: glycoprotein; membrane fusion
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Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.

EMBL; AF179430; AAF02695.1; -.

HISSP; P04849; ISVF.

InterPro; IPR00776; Fusion_gly.

Pfam; PF00523; fusion_gly.

SEQUENCE 550 AA; 59559 MW; 609EE024A7E59C54 CRC64;
                                                                                                                 STRAIN=9901V;
MEDINE-99460529; PubMed=9765410;
Takeda M., Kato A., Kobune F., Sakata H., Li Y., Shioda T., Sakai Y.,
Asakawa M., Nagai Y.,
                                                                                                                                                                "Measles virus attenuation associated with transcriptional impediment and a few amino acid changes in the polymerase and accessory proteins.";
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Pred. No. 0.065;
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Pred. No. 0.065;
0; Mismatches 0; Indels
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Viruses; sRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11234;
                                                  Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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SEOUENCE 550 AA; 59512 MW; 7AA4F1D117197BF9 CRC64;
01-MAY-1999 (TrEMBLrel. 10, Last sequence update) 01-0CT-2001 (TrEMBLrel. 18, Last annotation update)
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
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EMBL; AB012949; BAA33877.1; -.
EMBL; AB012948; BAA33871.1; -.
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Matches 15; Conservative
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                                                                           NCBI_TaxID=11234;
                       Fusion protein.
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                                      Measles virus.
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"Nucleotide sequences of the fusion protein gene of subacute sclerosing panencephalitis viruses: deduced amino acid sequences showed the cytoplasmic domain highly mutated --truncated, elongated or predicted secondary structure changed."; Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AR179437; AAF02702.1; -...
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Pred, No. 0.065;
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
VCBL_TaxID=11234;
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01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-UNU-2001 (TrEMBLrel. 17, Last annotation update)
Fusion protein.
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Best Local Similarity 100.v
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ROLD J.S., Hummel K.B., Rota P.A., Bellini W.J.;

Rota J.S., Hummel K.B., Rota P.A., Bellini W.J.;

Rota J.S., Hummel K.B., Rota P.A., Bellini W.J.;

Rota J.S., Hummel K.B., Rota P.A., Bellini W.J.;

Viroloy 1881135-142(1992).

EMBL; M81901; AAA46422.1.; -

EMBL; M81901; AAA46422.1.; -

HSSP; PORGA94; 1SVF.

InterPro; IPRO00776; Fusion_gly.

Fram; PRO0523; fusion_gly: 1.

SEQUENCE 550 AA; 59564 MW; A78EEC9CD6268E58 CRC64;
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MEDLINE-21635526; PubMed-11773423;
MAKU Kouomou D., Wild T.F.;
"Adaptation of Wild Type measles virus to tissue culture.";
J. Virol. 76:1505-1509(2002).
EMBL: AV059392; AAL29688.1; -.
Inter. AV059392; AAL29688.1; -.
Inter. Prob. IPRO00776; Fusion_gly.
Pfam; PF00523; Fusion_gly. 1.
SEOUENCE 550 AA; 59551 MW; 9A7A4BA99E4DA8E9 CRC64;
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Best Local Similarity 100.0%; Pred. No. 0.065;
Matches 15; Conservative 0; Mismatches 0; Indels
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11234;
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
                                                    01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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Ogura H.;
Nucleotide sequences of the fusion protein gene of subacute sclerosing panencephalitis viruses: deduced amino acid sequences showed the cytoplasmic domain highly mutated --truncated, elongated or predicted secondary structure changed.";
Submitted (AUG-1999) to the EMBL/Genbank/DDBJ databases.
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Schneider-Schaulies S.;
Schneider-Schaulies S.;
A recombinant measles vaccine virus expressing wild-type
glycoproteins: consequences for viral spread and cell tropism.";
EMBL; AJ13108; CAB38075.1;
HSSP; P04849; ISVF.
HIGFPRO; IPR000776; Fusion_gly.
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100.0%; Pred. No. 0.065;
live 0; Mismatches 0; Indels
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                                                                                                                                                            Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11234;
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBI_TaxID=11234;
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InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
SEQUENCE 550 AA; 59333 MW; 086E51FED5582BBA CRC64;
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SEQUENCE 550 AA; 59580 MW; 8255499968B5D862 CRC64;
                    01-WAY-2000 (TrEMBLrel. 13, Created)
01-WAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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Matches 15; Conservative
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ogura H.;
"Nucleotide sequences of the fusion protein gene of subacute
"Nucleotide sequences of the fusion protein gene of subacute
showed the cytoplasmic domain highly mutated --truncated, elongated or
predicted secondary structure changed.";
Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AFI0749436; AAF02701.1;
HSSP; P044849; 1SVF.
InterProt. IPRO00776; Fusion_gly.
Pfam; PF00523; fusion_gly.
SEQUENCE 550 AA, 59405 MW; OAEGDBFC5DD22BBA CRC64;
                                                                                                     Ning X., Ayata M., Morimoto K., Ito N., Shingai M., Kimura M.,
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 Measles virus.
Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID-11234;
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"Nucleotide sequences of the fusion protein gene of subacute
sclerosing panencephalitis viruses: deduced amino acid sequences
sclerosing panencephalitis viruses: deduced amino acid sequences
showed the cytoplasmic domain highly mutated --truncated, elongated or
predicted secondary structure changed.";
Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AR170431; AAR02656.1; -.
HSSP; P04849; ISVF.
InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly: 1.
SEQUENCE 550 AA; 59530 MW; 97C991C7E2169839 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Nucleotide sequences of the fusion protein gene of subacute sclenosing panencephalitis viruses: deduced amino acid sequences showed the cytoplasmic domain highly mutated --truncated, elongated or predicted secondary structure changed."; Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases. EMBL; AF179432; AAF02697.1; -- HISSP; P04849; 18VF.
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11234;
fusogenicity of measles virus.";
Submitted (AUG-1995) to the EMBL/GenBank/DDBJ databases.
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SEQUENCE 550 AA; 59504 MW; 2AA969D37FA5CA17 CRC64;
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-UNV-2001 (TrEMBLrel. 17, Last annotation update)
Fusion protein.
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01-MAY-2000 (TrEWBLrel. 13, Created)
01-MAY-2000 (TrEWBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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STRAIN-Nagahata(HB);
Shong J., Nakanishi M., Watanabe M., Ueda S.;
Shong J., Nakanishi M., Watanabe M., Ueda S.;
An amino acid alteration of F protein responsible for the enhanced fusogenicity of measles virus.";
Submitted (AUG-1995) to the EMBL/GenBank/DDBJ databases.
EMBL; D63944, BAA69951.1;
HSSP, P04849; ISVF.
InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
SEQUENCE 550 AA; 59589 MW; 73E7BD457ABA39B7 CRC64;
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Pred. No. 0.065;
0; Mismatches 0; Indels
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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Sheng J., Watanabe M., Ueda S.;
Sheng J., Watanabe M., Ueda V.;
"Selection of a neurotropic variant of measles virus.";
Submitted (AUG-1995) to the EMBL/GenBank/DDBJ databases.
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550 AA.
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Aianot P.K., Sminev A.G., Bezborodova S.V., Starov S.K., Drygin V.V.,
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBI_TaxID=11241;
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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Submitted (MAY-2001) to the EMBL/GenBank/DDBJ databases
EMBL; AX035887; AAK63190.1; -
InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
SEQUENCE 546 AA; 58572 MW; 449B2B2DD7405F0B CRC64;
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01-DEC-2001 (TrEMBLrel.
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Q91HA5;
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"Nucleotide sequences of the fusion protein gene of subacute sclerosing panencephalitis viruses: deduced amino acid sequences showed the cytoplasmic domain highly mutated --truncated, elongated or predicted secondary structure changed.";
Submitted (AGC-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AF19440; AAF02705.1;
EMBL; AF19439; AAF02706.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
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                                                                                                                                                                                                                                                Cattaneo R., Schmid A., Eschle D., Baczko K., ter Meulen V., Billeter M.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 72; DB 12; Length 537;
Pred. No. 0.063;
0; Mismatches 0; Indels
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBI_TaxID=11234;
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Pfam; PF00523; fusion_gly; 1.
SEQUENCE 537 AA; 58275 MW; DOA60AC66D979E06 CRC64;
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Pfam; PF00523; fusion_gly; 1.
SEQUENCE 545 AA; 58907 MW; 0234C28AE193E77D CRC64;
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                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
Cattaneo R., Billeter M.A.;
Virology 0:0-0(0).
EMBL; X16567; CAA34574.1; -.
EMBL; X16567; CAA34575.1; -.
HSSP; P04849; ISVF.
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STRAIN-NACAHATA; Sheng J., Nakanishi M., Watanabe M., Ueda S.; "An amino acid alteration of F protein responsible for the enhanced

Sheng J., Watanabe M., Ueda S.; "Selection of a neurotropic variant of measles virus."; Submitted (AUG-1995) to the EMBL/GenBank/DDBJ databases.

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SEQUENCE FROM N.A.
MEDILINE-89003063; PubMed-3167982;
Cattaneo R., Schmid A., Eschle D., Baczko K., ter Meulen V.,
Billeter M.A.;
"Biased hypermutation and other genetic changes in defective measles viruses in human brain infections.";
Cell 55:255-265(1988).
         P88973

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Pred. No. 0.063;
0; Mismatches 0; Indels
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBI_TaxID=11234;
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Cattaneo R., Billeter M.A.;
Virology 0:0-0(0).
EMBL; X16568; CAA34581.1; -.
EMBL; X16568; CAA34582.1; -.
HSSP; P04849; 1SVF.
Interpro; IRNO776; Fusion_gly.
Pfam; PF00523; fusion_gly: 0.
SEQUENCE 534 AA; 57899 MW; 637245E23B5BE044 CRC64;
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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Copyright (c) 1993 - 2003 Compugen Ltd.
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BOTULINUM NEUROTOXIN B, LIGHT-CHAIN.
BOTULINUM NEUROTOXIN B, HEAVY-CHAIN.
ZINC (CATALYIC) (BY SIMILARITY).
BY SIMILARITY.

445

229 230 233 233 436 29 217 224 463

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PRINTS; PRO0760; BONTOXILYSIN.
PRODOM; PRO01963; BONTOXILYSIN. 1.
PROSITE; PS00142; ZINC_PROTEASE; 1.
Neurotoxin, Transmembrane; Hydrolase; Metalloprotease; Zinc;
  MEROPS; M27.002; -.
InterPro; IPR000395; Bontoxilysin.
InterPro; IPR006025; Zn_MTpeptdse.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     by proteolytic cleavage of synaptobrevin.";
Nature 359:832-835(992).
-!- FUNCTION: BOTULINUS TOXIN ACTS BY INHIBITING NEUROTRANSMITTER
RELEASE. IT BINDS TO PERIPHERAL NEURONAL SYNAPSES, IS INTERNALIZED
AND MOVEE BY RETROGRADE TRANSPORT UP THE AXON INTO THE SPINAL CORD
WHERE IT CAN WOVE BETWEEN POSTSYNAPTIC AND PRESYNAPTIC NEURONS. IT
INHIBITS NEUROTRANSMITTER RELEASE BY ACTING AS A ZINC
ENDOPEPTIDASE THAT CLEAVES THE 76-GLN-|-PHE-77 BOND OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CATALTYTC ACTIVITY: Limited hydrolysis of proteins of the neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. No detected action on small molecule substrates.

COFACTOR: Binds 1 zinc ion per subunit (By similarity).

SUBUNIT: DISULFIDE-LINED HETERODIMER OF A LIGHT CHAIN (L) AND A HEAVY CHAIN (H). THE LIGHT CHAIN HAS THE PHARMACOLOGICAL ACTIVITY, WHILE THE NAND C-TERRINAL OF THE HEAVY CHAIN MEDIATE CHANNEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-93063293; PubMed-1331807; Schlavo G., Benfenati F., Poulain B., Rossetto O., de Laureto P.P., Dasgupta B.R., Montecucco C.; "Tetanus and botulinum-B neurotoxins block neurotransmitter release
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Schiavo G., Rossetto O., Santucci A., Dasgupta B.R., Montecucco C., "Botulinum neurotoxins are zinc proteins.";
J. Biol. Chem. 267:23479-23483(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FORMATION AND TOXIN BINDING, RESPECTIVELY.
SUBCELLULAR LOCATION: Secreted.
MISCELLANGOUS: THERE ARE SEVEN ANTIGENICALLY DISTINCT FORMS OF BOTULINUM MEDROTOXIN: TYPES A, B, Cl, D, E, F, AND G.
SIMILARITY: BELONGS TO PEPTIDASE PAMILY M27.
                                                                                                                                                                                                                                                                                                                                                                Schmidt J.J., Sathyamoorthy V., Dasgupta B.R.; "Partial amino acid sequences of botulinum neurotoxins types B and
                                                                                                                                    Dasgupta B.R., Datta A.; "Botulinum neurotoxin type B (strain 657): partial sequence and similarity with tetanus toxin."; Biochimie 70:811-817(1988).
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Clin. Microbiol. 31:2255-2262(1993).
                                                                                STRAIN-657;
MEDLINE-89000987; Pubmed=3139097;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IDENTIFICATION AS ZINC-PROTEASE.
AEDLINE=93054694; PubMed=1429690;
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                                                   SEQUENCE OF 1-44 AND 441-466.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-93054694;
                                                                                                                                                                                                                                                                                                            STRAIN-OKRA;
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                                                                                                                                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         African horse sickness virus 6 (AHSV-6) (African horse sickness virus
                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Williams C.F., Inoue T., Lucus A.-M., Zanotto P., Roy P.;
"The complete sequence of four major structural proteins of African horse sickness virus serotype 6: evolutionary relationships within and between the orbiviruses.";
Virus Res. 53:53-73(1998).
-!- PUNCTION: THE VP2 PROTEIN IS ONE OF THE TWO PROTEINS (WITH VP5) WHICH CONSTITUTE THE WIRUS PARTICLE OUTER CAPSID. IT IS THE MAJOR TARGET OF THE HOST IMMUNGENIC RESPONSE.
-!- SIMILARITY: BELONGS TO THE REOVIRUSES VP2 FAMILY.
                                                                                                                                                                                          ö
33 ZINC (CATALYTIC) (BY SIMILARITY).
45 INTERCHAIN (PROBABLE).
29 T -> M (IN REF. 4).
17 R -> G (IN REF. 2).
24 A -> S (IN REF. 2).
53 S -> R (IN REF. 2).
150670 MW; D21746E2C024DF43 CRC64;
                                                                                                                                                   Score 63; DB 1; Length 1290; Pred. No. 0.97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 62; DB 1; Length 1051; Pred. No. 1.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1051 AA; 122326 MW; 2B04DB9E389F4B5F CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (Serocype 0)).
Viruses; dsRNA viruses; Reoviridae; Orbivirus.
                                                                                                                                                                                                                                                                                                                                                                                                               (Rel. 37, Last sequence update) (Rel. 37, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                             PRT; 1051 AA.
                                                                                                                                                                                            Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-98278331; PubMed-9617769;
                                                                                                                                                                                                                                                                                                                                                       VP2_AHSV6 STANDARD; F
071024;
15-DEC-1998 (Rel. 37, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; AF021235; AAC40994.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro; IPR001742; Orbi_VP2. Pfam; PF00898; Orbi_VP2; 1.
                                                                                                                                                                                                                                                  31.0%;
                                                                                                                                                                                                                               15 SLFNNFTVSFWLRVPK 30
                                                                                                                                                     31.5%;
                                                                                                                                                                        62.5%;
                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Outer capsid protein VP2.
S2 OR L2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
                                                                                                                                                                      Local Similarity
les 10; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=86060;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (serotype 6)
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                                                                                                                                                                                                                                                                                                                                                                                                               15-DEC-1998
15-DEC-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
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EMBL; M81186; AAA23211.1; -. EMBL; Z11934; CAA77991.1; -. EMBL; X70817; CAA50148.1; -.

01-NOV-00. 01-NOV-00. 16-AUG-00 16-AUG-00. 06-DEC-00.

1EPW; 1F31;

PDB; PDB;

PDB;

1G9A; 1G9B;

1FQH;

PDB; PDB; PDB; PDB;

1G9D; 1I1E;

PDB;

PDB;

A48940; A48940.

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928 SRYONFSISFWVRIPK 943
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                                                                                                                 EMBL, M92906; AAA23263.1; -.
EMBL, S734676, AAC60475.1; -.
EMBL, X70820; CAA50151.1; -.
EMBL, X70816; CAA50147.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 31.5%;
56.2%;
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SEQUENCE OF 35-245 FROM N.A.
STRAIN=NCTC 7273;
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                                                                                                                                                                                 PIR; 140813; 140813.
PIR; S48109; S48109.
HSSP; P10845; 3BTA.
                                                                                                                                                                                                                                                                                                                                                                                                                                 429 44
1274 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity
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228
231
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ACT_SITE
METAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RELEASE. IT BINDS TO PERIPHERAL NEURONAL SYNAPSES, IS INTERNALIZED AND MOVES BY RETROGRADE TRANSPORT UP THE AXON INTO THE SPINAL CORD WHERE IT CAN MOVE BETWEEN POSTSYNAPTIC AND PRESYNAPTIC NEURONS. IT INHIBITS NEUROFRANSMITTER RELEASE BY ACTING AS A ZINC ENDOPEPTIDASE THAT CATALYZES THE HYDROLYSIS OF THE 58-GLN-|-LYS-59 BOND OF SYNAPTORREVINS-1 AND -2.
CATALYTIC ACTIVITY: Limited hydrolysis of proteins of the neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. No detected action on small molecule substrates.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -:- COFACTOR: Binds 1 zinc ion per subunit (By similarity).
-:- SUBUNIT: DISULFIDE-LINKED HETERODIMER OF A LIGHT CHAIN (L) AND A HEAVY CHAIN (H). THE LIGHT CHAIN HAS THE PHARMACOLOGICAL ACTIVITY, WHILE THE NAND C-TERMINAL OF THE HEAVY CHAIN MEDIATE CHANNEL FORMATION AND TOXIN BINDING, RESPECTIVELY.
-: SUBCELLULAR LOCATION: Secreted.
-:- SUBCELLULAR LOCATION: Secreted.
-:- MISCELLANEOUS: THERE ARE SEVEN ANTIGENICALLY DISTINCT FORMS OF BOTULINUM NEUBROTOXIN: TYPES A, B, Cl, D, E, F, AND G.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              East A.K., Collins M.D.;
"Conserved structure of genes encoding components of botulinum neurotoxin complex M and the sequence of the gene coding for the nontoxic component in nonproteolytic Clostridium botulinum type F."; Curr. Microbiol. 29:69-77(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 634-1002 FROM N.A.
MEDLINE-94013372; PubMed-8408542;
Campbell K., Callins M.D.;
Campbell K., Callins M.D.;
Gene probes for identification of the botulinal neurotoxin gene and specific identification of neurotoxin types B, E, and F.";
J. Clin. Microbiol. 31:2255-2262(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Yamasaki S., Baumeister A., Binz T., Blasi J., Link E., Cornille F., Roques B., Fykse E.M., Suedhof T.C., Jahn R., Niemann H.; "Cleavage of members of the synaptobrevin/VAMP family by types D and F botulinal neurotoxins and tetanus toxin.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                J. Biol. Chem. 269:12764-12772(1994).
                                                                                                                                                                                                                                                               Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
                                                                                                                                                                                                                                                                                                                                                                                                Roberts T.A., Thompson D.E.; "Sequence of the gene encoding type F neurotoxin of Clostridium
                                                                                                                                                              01-JUL-1993 (Rel. 26, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Botulinum neurotoxin type F precursor (EC 3.4.24.69) (BONT/F)
                                                                                                                                                                                                                                                                                                                                                               MEDLINE-93012902; PubMed-1398040;
East A.K., Richardson P.T., Allaway D., Collins M.D.,
Roberts T.A., Thompson D.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                FEMS Microbiol. Lett. 75:225-230(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=94230352; PubMed=8175689;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=Hobbs FT10;
MEDLINE=94297488; Pubmed=7764998;
                                                                                                                                               01-JUL-1993 (Rel. 26, Created)
01-JUL-1993 (Rel. 26, Last sequ
28-FEB-2003 (Rel. 41, Last anno
                 |:: ||: |||:|||||| SMYENFSTSFWIRIPK 950
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SLFNNFTVSFWLRVPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE OF 1-64 FROM N.A.
                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                 Clostridium botulinum.
                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                 STRAIN-ATCC 23387;
                                                                                                                                                                                                                   (Bontoxilysin F).
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                                                                                                                                                                                                                                                                                  Clostridium
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                                                                                                                 BXF_CLOBO
P30996;
                                                                               RESULT 4
BXF_CLOBO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Whelan S.M., Elmore M.J., Bodsworth N.J., Brehm J.K., Atkinson T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BOTULINUM NEUROTOXIN F, LIGHT-CHAIN.
BOTULINUM NEUROTOXIN F, HEAVY-CHAIN.
ZINC (CATALYTIC) (BY SIMILARITY).
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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INTERCHAIN (PROBABLE).
W; 5B99756A7438B921 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Molecular cloning of the Clostridium botulinum structural gene encoding the type B neurotoxin and determination of its entire
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BXB_CLOBO STANDARD; PRT; 1290 AA.
P10844; P10843;
01-JUL-1989 (Rel. 11, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Botulinum neurotoxin type B precursor (EC 3.4.24.69) (BONT/B)
                                                                                                                                                                                                                                                                                                                                                                                                                                                Neurotoxin; Transmembrane; Hydrolase; Metalloprotease; Zinc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 63; DB 1; Length 1274;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Szabo E.A., Pemberton J.M., Desmarchelier P.M.;
Submitted (APR-1992) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Environ. Microbiol. 58:2345-2354(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0.95;
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                                                                                                                                                                                                                                                                                                                               Interpro; IPR0060395; Bontoxilysin.
Interpro; IPR006025; Zn_MTpeptdse.
                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF01742; Peptidase_M27; 1.
ProDom; PD001963; Bontoxilysin; 1.
PROSITE; PS00142; ZINC_PROTEASE; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. MEDLINE-92384550; PubMed=1514783;
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Matches
    membrane, is then internalized by receptor-mediated endoytosis. The C-terminus of the heavy chain (H) is responsible for the adherence of the toxin to the cell surface while the N-terminus mediates transport of the light chain from the endoytic vesicle to the cytosol. After translocation, the light chain (L) hydrolyzes the 197-Gln-|-Arg-198 bond in SNAP-25, thereby blocking
                                                                                                                                     Dasgupta B.R., Foley J., Niece R.; "Partial sequence of the light chain of botulinum neurotoxin type A."; Biochemistry 26:4162-4162(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Binz T., Blasi J., Yamasaki S., Baumeister A., Link E., Suedhof T.C., Jahn R., Niemann H., Memann H., Proteolysis of SNAP-25 by types E and A botulinal neurotoxins."; J. Biol. Chem. 269:1617-1620(1994).
                                                                                                                                                                                                                                                                                                                                                                                                       MEDIINE-85285016; PubMed-3896784; Shone C.C., Hambleton P., Melling J.; Shone C.C., Hambleton P., Melling J.; Inactivation of Clostridium botulinum type A neurotoxin by trypsin and purification of two tryptic fragments. Proteolytic action near the COOH-terminus of the heavy subunit destroys toxin-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-94063091; PubMed-8243676; Schlavo G., Santtuci A., Dasgupta B.R., Mehta P.P., Jontes J., Benfenati F., Wilson M.C., Montecucco C.; Botlenati F., Wilson Serotypes A and E cleave SNAP-25 at distinct COOH-terminal peptide bonds."; FEBS Lett. 335:99-103(1993).
                                                                                                                                                                                                                                                                                            SEQUENCE OF 448-464 AND 872-895.
MEDILNE=88024662; PubMed=3178218;
Sathymoorthy V., Dasgupta B.R., Foley J., Niece R.L.;
Sathymoorthy V., Dasgupta B.R., Foley J., Niece R.L.;
Botulinum neurotoxin type A: cleavage of the heavy chain into two halves and their partial sequences.";
Arch. Biochem. Biophys. 266:142-151(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDINE-98455071; Pibmed-9783750;
Lacy D.B., Tepp W., Cohen A.C., Dasgupta B.R., Stevens R.C.;
"Crystal structure of botulinum neurotoxin type A and implications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Nat. Struct. Biol. 5:898-902(1998).
-!- FUNCTION: Inhibits acetylcholine release. The botulinum toxin binds with high affinity to peripheral neuronal presynaptic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rigoni M., Caccin P., Johnson E.A., Montecucco C., Rossetto O., "Site-directed mutagenesis identifies active-site residues of the light chain of botulinum neurotoxin type a."; Biochem. Biophys. Res. Commun. 288:1231-1237(2001).
                                                      Schmidt J.J., Sartymoorthy V., Dasgupta B.R.;
"Partial amino acid sequence of the heavy and light chains of botulinum neurotoxin type A.";
Biochem. Biophys. Res. Commun. 119:900-904(1984).
                                                                                                                                                                                                                                       "Botulinum neurotoxin type A: sequence of amino acids at the N-terminus and around the nicking site.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MUTAGENESIS OF GLU-261; PHE-265 AND TYR-365.
MEDLINE-21556941; Pubmed-11700044;
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                         SEQUENCE OF 1-16.
MEDLINE-84178501; PubMed=6370252;
                                                                                                                                                                                                           MEDLINE=91120847; PubMed=2126206; Dasgupta B.R., Dekleva M.L.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IDENTIFICATION OF SUBSTRATE. MEDLINE-94124495; Pubmed-8294407;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Eur. J. Biochem. 151:75-82(1985).
                                                                                                                                                                                                SEQUENCE OF 1-5 AND 444-456.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         IDENTIFICATION OF SUBSTRATE.
                                                                                                                                                                                                                                                                   Biochimie 72:661-664(1990).
FEBS Lett. 376:41-44(1995).
                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 448-482.
                                                                                                                         SEQUENCE OF 1-46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   toxicity."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   activity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration
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neurotransmitter release. Inhibition of acetylcholine release results in flaccid paralysis, with frequent heart or respiratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               F->A: DECREASE IN ENZYMATIC ACTIVITY.
Y->A: DECREASE IN ENZYMATIC ACTIVITY.
P -> Q (IN REF. 1).
E -> P (IN REF. 9).
T -> L (IN REF. 8).
S -> K (IN REF. 8).
S -> K (IN REF. 8).
                                                                                                                                              COFFACTOR: Binds 1 zhnc ion per subunit.
SUBUNIT: Disulfide-linked heterodimer of a light chain (L) and heavy chain (H).
SUBCELLULAR LOCATION: Secreted.
PHARMACEUTICAL: Available under the name BOTOX (Allergan) for
                                                                           CATALYTIC ACTIVITY: Limited hydrolysis of proteins of the neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. detected action on small molecule substrates.
                                                                                                                                                                                                                                                                      the treatment of strabismus and blepharospasm associated with dystonia and cervical dystonia. Also used for the treatment of hemifacial spasm and a number of other neurological disorders characterized by abnormal muscle contraction.

MISCELANBOUS: There are seven antigenically distinct forms of botulinum neurotoxin: Types A, B, Cl, D, E, F, and G. SIMILARITY: BELONGS TO PEPTIDASE FAMILY M27.

BATABASE: NAME-BOTOX product information Web site;

WAWM-"http://www.botos.com/index.jsp?hpsproductinfo".
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WWW="http://www.expasy.org/spotlight/articles/sptlt019.html".
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     BOTULINUM NEUROTOXIN A, LIGHT-CHAIN.
BOTULINUM NEUROTOXIN A, HEAVY-CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           E->A: DRASTIC DECREASE IN ENZYMATIC ACTIVITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Neurotoxin; Transmembrane; Hydrolase; Metalloprotease; Zinc;
Pharmaceutical; 3D-structure.
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INTERCHAIN.
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Pred. No. 0.51;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Interpro; IPR000395; Bontoxilysin. InterPro; IPR006025; Zn_MTpeptdse. Pfam; PF01742; Peptidase. MA7; I. Probom; PD001963; Bontoxilysin; I. PROSITE; PS00142; ZINC_PROTEASE; I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL, X52066, CAA36289.1, --
EMBL, M30196; AAA23362.1; --
EMBL, X92973; CAA63551.1; --
EMBL, D67030; BAA11051.1; --
EMBL, M27892; AAA23269.1; --
PIR, A35294, BTCLAB.
PDB, 3BTA, 01-0CT-99.
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56.2%;
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Gaps

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2; Indels

Mismatches

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CATALTIC ACTIVITY: Limited hydrolysis of proteins of the neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. No detected action on small molecule substrates.

COFACTOR: Binds 1 zinc ion per subunit (By similarity).

SUBUNIT: Disulfide-linked heterodimer of a light chain (L) and a heavy chain (H). The light chain has the pharmacological activity, while the N- and C-terminal of the heavy chain mediate channel formation and toxin binding, respectively.

SUBCELLUAR LOCATION: Secreted (By similarity).
                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF01/42; reproduction:

PRINTS; PR00760; BONTOXILYSIN.

ProDom; PD001963; BontoXilysin; 1.

PROSITE; PS00142; ZINC_PROPEASE; 1.

NeurotoXin; Hydrolase; Metalloprotease; Zinc.

INIT_MET 0 BY SIMILARITY.

CHAIN 1 441 BOTULINUM NEUROTOXIN G, LIGHT-CHAIN.

**A 1 1296 BOTULINUM NEUROTOXIN G, HEAVY-CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                              Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
                                                                            ö
                                                                                                                                                                                                                                                                                       01-NOV-1997 (Rel. 35, Created)
01-NOV-1997 (Rel. 35, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Botulinum neurotoxin type G precursor (EC 3.4.24.69) (BONT/G)
                                Length 1314;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BOTULINUM NEUROTOXIN: TYPES A, B, C1, D, E, F, AND G.
                                                                         Indels
Score 114; DB 1; Lend NO. 6.5e-08;
                                                     Pred. No. 6.56
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      send an email to license@isb-sib.ch)
                                                                                                                                       16 LFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR006025; Zn_MTpeptdse.
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                                57.0%;
95.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; X74162; CAA52275.1; -.
                                                                       Conservative
                                                                                                                                                                                                                                                        STANDARD;
                                                     Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ENDOPEPTIDASE.
                                                                                                                                                                                                                                                                                                                                                                             (Bontoxilysin G)
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                                  Query Match
Best Local Simi
Matches 21;
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Q60393;
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STRAIN-TYPE A NH;
MEDLINE-96096783; PubMed-8521962;
FUJITA R., FUJITA W., Councilla H., Kumon H., Oguma K.;
"Molecular characterization of two forms of nontoxic-nonhemagalutinin components of Clostridium botulinum type A progenitor toxins.",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Betley M.J., Somers E., Dasgupta B.R.; "Characterization of botulinum type A neurotoxin gene: delineation of the N-terminal encoding region.";
                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        East A.K., Bhandari M., Stacey J.M., Campbell K.D., Collins M.D.;
"Organization and phylogenetic interrelationships of genes encoding components of the botulinum toxin complex in proteolytic clostridium botulinum types A, B, and F: evidence of chimeric sequences in the gene encoding the nontoxic nonhemagglutinin component.";
Int. J. Syst. Bacteriol. 46:1105-1112(1996).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Binz B., Kuarzono H., Wille M., Frevent J., Wernars K., Niemann H.; "The complete sequence of botulinum neurotoxin type A and comparison with other clostridial neurotoxins.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Thompson D.E., Brehm J.K., Oultram J.D., Swinfield T.-J., Shone C.C., Atkinson T., Melling J., Minton N.P.; "The complete amino acid sequence of the Clostridium botulinum type neurotoxin, deduced by nucleotide sequence analysis of the encoding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BXAL_CLOBO STANDARD; PRT; 1295 AA.
P10845; P01561; P18639;
01-JUL-1989 (Rel. 11, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
01-JUL-1993 (Rel. 41, Last annotation update)
Botulinum neurotoxin type A precursor (EC 3.4, 24.69) (BoNT/A)
(Bontoxilysin A) (BOTOX) (Contains: Botulinum neurotoxin A, light-chain; Botulinum neurotoxin A, heavy-chain).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
                                                                                                                                                                                                                                     ó
                                                              (BY SIMILARITY).
     (BY SIMILARITY)
                                                                                                                                                                          DB 1; Length 1296; 0.27;
                                                                                                                                                                                                                                     4; Indels
                                                     33 ZINC (CATALYTIC) (BY SIMILA
19 INTERCHAIN (PROBABLE).
149013 MW; DC8E47E15F665C31 CRC64;
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     ZINC (CATALYTIC)
                                                                                                                                                                                                           ; Pred. No. 0.27
10; Mismatches
                                BY SIMILARITY
                                                                                                                                                                                Score 67;
                                                                                                                                                                                                                                                                                                                                                    927 SMFDNFSINFWVRTPKYNNDIQ 949
                                                                                                                                                                                                                                                                                           SLFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Biol. Chem. 265:9153-9158(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STRAIN=NCTC 2916;
MEDLINE=90235864; PubMed=2185020;
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                                                                                                                                                                          33.5%;
39.1%;
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                                                                                                                                                                                                                                  9; Conservative
229
230
233
449
229 22
230 23
233 23
435 44
                                                                                                                                                                                                           Local Similarity
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STRAND
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    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@illow.sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                neuroccxin.;
Nat. Struct. Biol. 4:788-792(1997).

**Partuct. Biol. 4:788-792(1997).

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SUBUNIT: THE PRECURSOR POLYPEPTIDE IS SUBSEQUENTLY CLEAVED TO
YIELD SUBCHAINS L AND H. THESE REMAIN LINKED BY A DISULFIDE BRIDGE
AND ARE NON-TOXIC AFTER SEPARATION.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    X-RAY CRYSTALLOGRAPHY (2.7 ANGSTROMS) OF 874-1314.
MEDLINE-97475217; PubMed-9334741;
Umland T.C., Wingert L.M., Swaminathan S., Furey W.F., Schmidt J.J.,
                                                                                                                                                                                                                                                                                                                                                      MEDLINE=93063293; PubMed=1331807; Schlavo G., Benfenati F., Poulain B., Rossetto O., de Laureto P.P., Dasgupta B.R., Montecucco C.; Bretanus and botulinum-B neurotoxins block neurotransmitter release by proteolytic cleavage of synaptobrevin."; Nature 359:832-835(1992).
                                                                                                                                                                                                                                                        "Tetanus toxin is a zinc protein and its inhibition of neurotransmitter release and protease activity depend on zinc."; EMBO J. 11:3577-3583(1992).
                                                                           Kriegistein K.G., Henschen A.H., Weller U., Habermann E.;
"Limited proteolysis of tetanus toxin. Relation to activity and
identification of ceavage sites.";
Eur. J. Biochem. 202:41-51(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BOND OF SYNAPTOBREVIN-2.
CATALYTIC ACTIVITY: Hydrolysis of 76-Gln-1-Phe-77 bond in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -1- MISCELLANBOUS: THE C-TERMINAL OF THE HEAVY CHAIN BINDS TO GANGLIOSIDE RECEPTORS.
-1- SIMILARITY: BELONGS TO PEPTIDASE FAMILY M27.
                                                                                                                                                                                                                       Schiavo G., Poulain B., Rossetto O., Benfenati F., Tauc L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'Structure of the receptor binding fragment HC of tetanus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000395; Bontoxilysin.
InterPro; IPR006025; Zn_MTpeptdse.
Pfam; PF01742; Peptidase_M27; 1.
                                   PARTIAL SEQUENCE.
MEDLINE-92037649; PubMed-1935979;
                                                                                                                                                                             IDENTIFICATION AS ZINC-PROTEASE. MEDLINE=93010948; Pubmed=1396558;
Eur. J. Biochem. 188:39-45(1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; X04436; CAA28033.1; -.
EMBL; X06214; CAA29564.1; -.
EMBL; AF528097; AA037454.1; -.
EMBL; M12739; AAA32382.1; -.
PIR; A25689; BTCLTN.
                                                                                                                                                                                                                                                                                                                     [8]
IDENTIFICATION OF SUBSTRATE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1AF9; 29-APR-98.
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1DLL; 24-MAR-00.
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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OM protein - protein search, using sw model

September 24, 2003, 17:00:31; Search time 6.86704 Seconds (without alignments) 253.383 Million cell updates/sec Run on:

Perfect score:

37 US-09-848-834A-14 200 1 XHWSYGLRPGSSGPSLFNNFTVSFWLRVPKVSASHLE Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

127863 segs, 47026705 residues Searched:

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 08

Maximum Match 100% Listing first 45 summaries

SwissProt_41:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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51.5 51.5 51.5 51.5 50.5 50.5 49.5 49.5	T 1 CLOTE TETX_CLOTE	P04958; 13-A0G-1987 (Rel. 05, Last stander) 13-A0G-1987 (Rel. 05, Last stander) 15-SEP-2003 (Rel. 42, Last stander) Tetanus toxin precursor (EC Tetanus toxin light chain (Cohain (Coh	Clostridium tetani. Clostridium tetani. Plasmid pB88, and Plasmid 75 Kbp. Bacteria; Firmicutes; Clostridia; Clostridium.	UEN SMJ LIN 1er 1er	DUENCE FRAIN=CN39 NLINE=876 Irweather ne comple	13) SEQUENCE FROM N.A. STRAIN=Massachusetts MEDLINE=22457253; Pul Brueggemann H., Baeuu Decker I., Herzberg (Gottschalk G.; The genome sequence	tetanus disease."; proc. Natl. Acad. Sci. U.S.A. 100 [4] SEQUENCE OF 742-1314 FROM N.A. PLASMID-75 Kbp. MEDIAINE-86085672; Pubmed=3510187; Fairweather N.F., Lyness V.A., Pi "Cloning, nucleocide sequencing, fragment C in Escherichia coli."; J. Bacteriol. 165:21-27(1986).	5 PARTIAL SEQUENCE, AND DISULFIDE MEDLINE-90201034; Pubmed-210802; Kriegistein K., Henschen A., We. "Arrangement of disulfide bridge in tetanus toxin.";
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R.Burgus, R.; Butcher, M.; Amoss, M.; Ling, N.; Monahan, M.; Rivier, J.; Fellows, R.; Bl. Proc. Natl. Acad. Sci. U.S.A. 69, 278-282, 1972
Proc. Natl. Acad. Sci. U.S.A. 69, 278-282, 1972
Proc. Natl. Acad. Sci. U.S.A. 69, 278-282, 1972
A.; Title: Primary structure of the ovine hypothalamic luteinizing hormone-releasing factch. A.; Reference number: A93780; MUID:72094314; PMID:4550508
A.; Recession: A93780
A.; Molecule type: protein
A.; Residues: 1-10 cBUR>
A.; Residues: 1-10 cBUR>
A.; Residues: 1-10 cBUR>
A.; Residues: This hypothalamic hormone stimulates the secretion of both luteinizing and fc C.; Superfamily: gonadoilberin
C.; Superfamily: gonadoilberin
C.; Superfamily: gonadoilberin
C.; Keywords: amidated carboxyl end; hormone; hypothalamus; pyroglutamic acid
F: 1./Modified site: pyrrolidone carboxyl end (GIN) #status experimental
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C.Species: Xenopus laevis (African clawed frog)
C.Scession: 13.8ep-1996 #sequence_revision 13.5ep-1996 #text_change 16.Jul-1999
C.Accession: 151423
R.Hayes, W.P.; Wray, S.; Battey, J.F.
Endocrinology 134, 1835-1845, 1994
A.Title: The frog GnRH-1 gene has a mammalian-like expression pattern and conserved doma A.Accession: 151423
A.Accession: 151423
A.MUD:94185563; PMID:8137750
A.Accession: 151423
A.Status: preliminary; translated from GB/EMBL/DDBJ
A.Residues: 1-89 <HAY>
A.Residues: 1-89 <HAY>
A.Residues: 1-89 <HAY>
A.Gross-references: GB:L28040; NID:9496291; PIDN:AAA49728.1; PID:9496292
C.Genetics:
A.Gene: GRR-I
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                                                                                                    ;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
;Date: 31-Dec-1991 #sequence_revision 31-Dec-1991 #text_change 18-Mar-1997;Accession: A93780; A01411
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29.0%; Score 58; DB 1; Length 10;
Best Local Similarity 100.0%; Pred. No. 0.041;
Matches 9; Conservative 0; Mismatches 0; Indels
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25 HWSYGLRPG 33
                                                               gonadoliberin - sheep
RESULT 14
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A Note: gonadoliberin stimulates pituitary secretion of lutropin and follit-up A:Note: gonadoliberin-associated protein may have prolactin release inhibiting act_vi C: Superfamily: gonadoliberin and carboxyl end; hormone; hypothalamus; placenta; pyroglutamic a_id F:1-23/Domain: signal sequence #status predicted <SIG>
F:24-92/Product: progonadoliberin #status predicted <GRN>
F:24-33/Product: gonadoliberin #status experimental #cMMT>
F:24-33/Product: gonadoliberin #status experimental #cMMT>
F:24-37/Product: gonadoliberin associated protein #status predicted <GAP>
F:24/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) #status experimental #status form) #status experimental #status form #status experimental #status form #status experimental #status form #status experimental #status form 
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C; Species: Sus scrofa domestica (domestic pig)
C; Date: 13-Jul-1981 #sequence_revision 13-Jul-1981 #text_change 18-Mar-1997
C; Accession: A01411
R; Babb, Y.; Matsuo, H.; Schally, A.V.
Biochem. Biophys. Res. Commun. 44, 459-463, 1971
A; Title: Structure of the porcine LH- and FSH-releasing hormone. II. Confirmation of A; Reference number: A90172; MUID:72114303; PMID:4946067
A; Accession: A01411
A; Matsuo, H.; Arimura, A.; Nair, R.M.G.; Schally, A.V.
R; Matsuo, H.; Arimura, A.; Nair, R.M.G.; Schally, A.V.
B; Matsuo, H.; Arimura, A.; Nair, R.M.G.; Schally, A.V.
A; Title: Synthesis of the porcine LH- and FSH-releasing hormone by the solid-phase me A; Reference number: A90176; MUID:72065376; PMID:4942726
A; Contents: annotation: synthesis
A; Note: the synthetic and natural hormones have the same physicochemical and biolc; R; Baba, Y; Arimura, A.; Schally, A.V.
B; Schally, A.V.
B; Schally, A.V.
B; Schally, A.V.
A; Title: On the tryptophan residue in porcine LH and FSH-releasing hormone.
A; Reference number: A90175; MUID:7211744; PMID:4946275
A; Contents: annotation
                                                                                                                                                                             W.; Arr3tk
                                                                                                                                                                                                                                                      A, Title: Sequential degradation of the neuropeptide gonadotropin-releasing hormon∈ by A, Reference number: S45718; MUID:94283597; PMID:8013634
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C;Comment: This hypothalamic hormone stimulates the secretion of both luteinizing and
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                                           A;Molecule type: protein
A;Residues: 24-33 «TAN»
A;Experimental source: placental trophoblasts
Rs.Leibovitz, D.; Koch, Y.; Pitzer, F.; Fridkin, M.; Dantes, A.; Baumeister,
FEBS Lett. 346, 203-206, 1994
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C;Keywords: amidated carboxyl end; hormone; hypothalamus; pyroglutamic acid
F;1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
F;10/Modified site: amidated carboxyl end (Gly) #status experimental
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A;Cross-references: GDB:133746; OMIM:227200; OMIM:152760
A;Map position: 8p21-8p11.2
A;Introns: 47/3; 79/3
C;Function:
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Pred. No. 0.36;
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Conservative 0; Mismatches
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1 Similarity 52.4%;
11; Conservative
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Matches 11; Conserv
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Matches 9; Conserv
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A; Residues: 1-92 < ADE>
A; Cross-references: GB:M12578; NID:9183418; PIDN:AAA35916.1; PID:9386749
A; Experimental source: hypothalamus
B; Seeburg, P.H.; Adelman, J.P.
Nature 311, 666-668, 1984
A; Title: Characterization of CDNA for precursor of human luteinizing hormone releasing P; A; Reference number: A93342; MUD:85012739; PMID:6090951
A; Reference number: A93342
A; Recession: A93342
A; Residues: 1-15, S', 17-92 < SEE>
A; Residues: 1-15, S', 17-92 < SEE>
A; Cross-references: GB:X01059; NID:934356; PIDN:CAA25526.1; PID:934357
A; Experimental source: placenta
B; Tan, L.; Rousseau, P.
B; Commun. 109, 1061-1071, 1982
A; Title: The chemical identity of the immunoreactive LHRH-like peptide biosynthesized in A; Reference number: A90108; MUID:83126573; PMID:6760865
                                                                                                                                                                                                                                                                                                                                                 gonadoliberin precursor - rhesus macaque (fragment)
N;Alternate names: luteinizing hormone releasing hormone
C;Species: Macaca mulatta (rhesus macaque)
C;Decies: Macaca mulatta (rhesus macaque)
C;Date: 02-Auq-1996 #sequence_revision 02-Auq-1996 #text_change 16-Jul-1999
C;Accession: 178541
R;Ma, Y.J.; Costa, M.E.; Ojeda, S.R.
Neurcendocrinology 60, 346-359, 1994
A;Tile: Developmental expression of the genes encoding transforming growth factor alpha
A;Reference number: 158134; MUID:95124501; PMID:7545971
A;Accession: 178541
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Residues: 1-67 <RES>
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R; Adelman, J.P.; Mason, A.J.; Hayflick, J.S.; Seeburg, P.H.
Rroc. Natl. Acad. Sci. U.S.A. 83, 179-183, 1986
A; Title: Isolation of the gene and hypothalamic cDNA for the common precursor of gonadot A; Reference number: A94090; MUID:86094338; PMID:2867548
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C;Species: Homo sapiens (man)
C;Species: Homo sapiens (man)
C;Date: 17-Mar-1987 #sequence_revision 21-Jul-1995 #text_change 08-Dec-2000
C;Accession: S05308; A26173; A93342; A90108; A01410; S45718
R;Hayflick, J.S.; Adelman, J.P.; Seeburg, P.H.
Nucleic Acids Res. 17, 6403-6404, 1989
A;Title: The complete nucleotide sequence of the human gonadotropin-releasing hormone geals.
A;Reference number: S05308; MUID:89366682; PMID:2671939
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C;Superfamily: gonadoliberin
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        Mismatches
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297 YONFSISFWVRIPK 310
                                                                                  17 FNNFTVSFWLRVPK 30
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    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
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Dotulinum neurotoxin type A - Clostridium botulinum
C;Species: Clostridium botulinum
C;Species: Clostridium botulinum
C;Species: 12-Aug-1996 #sequence_revision 12-Aug-1996 #text_change 16-Jul-1999
C;Accession: 140645
R;Willems, A.; East, A.K.; Lawson, P.A.; Collins, M.D.
Res. Microbiol. 144, 547-556, 1993
A;Title: Sequence of the gene coding for the neurotoxin of Clostridium botulinum type A;Reference number: 140645; MJID:94143603; PMID:8310180
A;Accession: 140645
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Rolecule type: DNA
A;Residues: 1-1296 KRES>
A;Cross-references: EMELS:
A;Cross-references: EMELS: NID:9507070; PIDN:CAA51824.1; PID:9507071
C;Superfamily: tetanus toxin
C;Keywords: neurotoxin
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C;Date: 14-Jul-1995 #sequence_revision 10-Nov-1995 #text_change 16-Jul-1999
C;Date: 14-Jul-1995 #sequence_revision 10-Nov-1995 #text_change 16-Jul-1999
C;Accession: S48110
R;Campbell, K.D.; Collins, M.D.; East, A.K.
J. Clin. Microbiol. 31, 2255-2262, 1993
A;Title: Gene probes for identification of the botulinal neurotoxin gene and specific A;Accession: S48103; MUID:94013372; PMID:8408542
A;Accession: S48110
A;Status: preliminary; translation not shown
A;Molecule type: DNA
R;Schiavo, G.; Benfenati, F.; Poulain, B.; Rossetto, O.; de Laureto, P.P.; DasGupta, Nature 359, 832-835, 1992
A;Title: Tetanus and botulinum-B neurotoxins block neurotransmitter release by proteo A;Title: Tetanus and botulinum-B neurotoxins block neurotransmitter release by proteo A;Reference number: S27125; MUID: 93063293; PMID: 1331807
A;Contents: annotation
C;Comment: Botulinum neurotoxins inhibit neurotransmitter release from cholinergic sy C;Genetics:
                                                                                                                                                                                                                                                     As Gene: bont/b
C; Function:
A. Description: catalyzes hydrolysis of a Gln-Phe peptide bond in synaptobrevin 2
A. Description: catalyzes hydrolysis of a Gln-Phe peptide bond in synaptobrevin 2
C; Superfamily: tetanus toxin
C; Keywords: hydrolase; metalloproteinase; neurotoxin; transmembrane protein; zinc
F; 2-441/Product: bontoxilysin B light chain #status experimental <LGHT>
F; 441/Product: bontoxilysin B heavy chain #status experimental <HVY>
F; 230, 234/Binding site: zinc (His) #status predicted
F; 231/Active site: Glu #status predicted
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C;Superfamily: tetanus toxin
C;Keywords: neurotoxin
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Pred. No. 2.7;
6; Mismatches
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Pred. No. 0.91;
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SVFLDFSVSFWIRIPK 936
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57.1%;
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Matches 10; Conservative
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                                                                                                        bontoxilysin (EC 3.4.24.69) B precursor - Clostridium botulinum
Nathernaes: botulinum metrotoxin type B (BoNT/B)
C;Species: Clostridium botulinum
C;Date: 19-Dec-1993 #sequence_revision 18-Nov-1994 #text_change 18-Jun-1999
C;Date: 19-Dec-1993 #sequence_revision 18-Nov-1994 #text_change 18-Jun-1999
C;Cacession: Ad8940; S48105; S2155; A4281; S07155; S08562; S07128; S08573; S08574
R;Whelan, S.M.: Elmore, M.J.: Bodsworth, N.J.: Brehm, J.K.; Atkinson, T.; Minton, N.P.
Appl. Environ. Microbiol. 59, 2345-2354, 1992
A;Title: Molecular cloning of the Clostridium botulinum structural gene encoding the typ
A;Reference number: A48940; MUID:92384550; PMID:1514783
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A; Residues: 442-459 <SCH3>
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R.Campbell, K.D.; Collins, M.D.; East, A.K.
J. Clin. Microbiol. 31, 2255-2262, 1993
A;Title: Gene probes for identification of the botulinal neurotoxin gene and speci-ic A;Feference number: $48103; MUID:94013372; PMID:8408542
A;Accession: $48109
A;Status: preliminary; nucleic acid sequence not shown; translation not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Molecule type: DNA
A;Residues: 1-369 <CAM>
A;Cross-references: EMBL:X70820; NID:g407790; PIDN:CAA50151.1; PID:g407791
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, January 1993
C;Superfamily: tetanus toxin
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C;Species: Clostridium botulinum
C;Species: Clostridium botulinum
C;Species: 16-Aug-1996 #sequence_revision 16-Aug-1996 #text_change 16-Jul-1999
C;Accession: 140813; S48108
R;East, A.K.; Richardadon, P.T.; Allaway, D.; Collins, M.D.; Roberts, T.A.; Thompscn, FEMS Microbiol. Lett. 96, 225-230, 1992
A;Title: Sequence of the gene encoding type F neurotoxin of Clostridium botulinum.
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548109
centration type F - Clostridium botulinum (fragment)
c.species: Clostridium botulinum
C;Species: Clostridium botulinum
C;Date: 12-Feb-1998 #sequence_revision 20-Feb-1998 #text_change 16-Jul-1999
C;Accession: 548109
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A, Residues: 634-1002 <CAM>
A). Residues: 634-1002 <CAM>
C. Superfamily: tetanus toxin
C; Superfamily: tetanus toxin
C; Keywords: neurotoxin
                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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                                                            Length 1291;
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A,Status: preliminary; translated from GB/EMBL/DDBJ
A,Status: preliminary; translated from GB/EMBL/DDBJ
A,Molecule type: DNA
A,Residues: 1-1274 <RES>
A;Residues: 1-1274 <RES>
A;Cross-references: GB:M92906; NID:G144866; PIDN:AAA23263
B;Campbell, K.D.; Collins, M.D.; East, A.K.
J. Clin. Microbiol. 31, 2255-2262, 1993
A;Title: Gene probes for identification of the botulinal A;Reference number: S48108
A;Accession: S48108
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                                                                                                                            5; Mismatches
                                                            32.0%; Score 64;
llarity 62.5%; Pred. No.
Conservative 5; Mismatc
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F;231/Active site: Glu #status predicted
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921 SMFLDFSVSFWIRIPK 936
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295 SRYQNFSISFWVRIPK 310
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SRYQNFSISFWVRIPK 943
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Best Local Similarity 56.2
Matches 9; Conservative
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Matches
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C;Species Clostridium barati
C;Species Clostridium barati
C;Date: 13-3na-1995 #sequence_revision 13-Jan-1995 #text_change 16-Jul-1999
C;Accession: S33411; S31860
C;Accession: S33411; S31860
C;Accession: Nature Control of the Same Control of S3411; MUID:93252228; PMID:8486245
A;Reference number: S33411; MUID:93252228; PMID:8486245
A;Status: preliminary
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Pred. No. 1.4;
4; Mismatches
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| 920 SRYQNFSVSFWVRIPK 935
                                                                   |:: ||: ||!|| SMYENFSTSFWIRIPK 951
                              SLFNNFTVSFWLRVPK 30
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62.5%;
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Best Local Similarity 62.5
Matches 10; Conservative
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A; Residues: 1-1268 <THO>
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              A; Residues: 1-1296 <BIN>
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Matches 9; Conserv
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A; Residues: 1-35 <BET>
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A; Status: preliminar
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                                                                                                                                                                                                                    A: Molecule type: protein
A:Residues: 2-31 <DEF>
C:COmment: The source of this protein was an extrachromosomal plasmid.
C:Comment: The source of this protein was an extrachromosomal plasmid.
C:Comment: The precursor is cleaved by endogenous proteinase activity to form light (fragual chains are not toxic when separated). The amino end of the heavy chain (fragment B) C:Comment: Fragment B forms ion channels in a lipid bilayer. Fragment C binds to ganglid C:Comment: This potent neurotoxin binds to peripheral neuronal synapses, is internalized presynaptic neurons. It inhibits neurotransmitter release by proteolytic cleavage of sy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Function:
A;Description: blocks neuroexocytosis via hydrolysis of a Gln-Phe peptide bond in synapt
C;Superfamily: tetanus toxin
C;Superfamily: tetanus toxin
C;Superfamily: tetanus toxin
C;Keywords: hydrolase; metalloproteinase; neurotoxin; transmembrane protein; zinc
C;Keywords: hydrolase; metalloproteinase; neurotoxin; transmembrane protein; zinc
F;2-457/Product: tentoxylysin light chain (fragment B) #status predicted <TTL>
F;461-847/Pomain: channel forming (fragment B) #status predicted <TXB>
F;865-1315/Domain: ganglioside binding (fragment C) #status predicted <TXC>
F;233,737/Banding site: zinc (His) #status predicted
F;234/Active site: Glu #status predicted
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N:Alternate names: botulinum neurotoxin type A
C;Species a Clostridium botulinum neurotoxin type A
C;Species al-Mar-1993 #sequence_revision 31-Mar-1993 #text_change 18-Jun-1999
C;Accession: A35294; S08492; S68220; A33401; A53884; A60025; A27000
C;Accession: A35294; S08492; S68220; A33401; A53884; A60025; A27000
J. Biol. Chem. 265, 9153-9158, 1990
A;Title: The complete sequence of botulinum neurotoxin type A and comparison with other
R;de Filippis, V.; Vangelista, L.; Schiavo, G.; Tonello, F.; Montecucco, C.
Buc, J. Blochem. 229, 61-69, 1995
A;Title: Structural studies on the zinc-endopeptidase light chain of tetanus neurotoxin.
A;Reference number: 869348; MUID:95262688; PMID:7744050
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C;Species: Clostridium botulinum
C;Species: Clostridium botulinum
C;Date: 07-Oct-1994 #sequence_revision 01-Dec-1995 #text_change 16-Jul-1999
C;Accession: 539791
R;Campbell, K.; Collins, M.D.; East, A.K.
Biochim. Blophys. Acta 1216, 487-491, 1993
A;Title: Nucleotide sequence of the gene coding for Clostridium botulinum (Clostridium in A;Reference number: 539791
A;Reference number: 539791
A;Accession: 539791
A;Accession: S39791

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ouery Match
Best Local Similarity
-has 9; Conserva
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A; Molecule type: DNA
                                                                                                                                                                                            A; Accession: S69348
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15
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A; Molecule type: DNA
A; Residues: 1-12 <FUJ)
A; Residues: 1-12 <FUJ)
A; Residues: 1-12 <FUJ)
B; Residues: EMBL: D67030; DDBJ:D50421; NID:q2160224
B; Betley, M.J.; Somers, E.; DasGupta, B.R.
Biochem. Biophys. Res. Commun. 162, 1388-1395, 1989
A; Title: Characterization of botulinum type A neurotoxin gene: delineation of the N-t
A; Reference number: A33401; MUID:89350959; PMID:2669749
A; Accession: A33401.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C; Superfāmily: tetanus toxin
C; Keywords: disulfide bond; hydrolase; metalloproteinase; neurotoxin; transmembrane p
E; 2-444/Product: bontoxilysin A light chain #status experimental <LGHT>
E; 445-1296/Product: bontoxilysin A heavy chain #status experimental <HVY>
E; 223, 227/Binding site: zinc (His) #status predicted
E; 224/Active site: Glu #status predicted
                                                                                                                                                                               A;Title: The complete amino acid sequence of the Clostridium botulinum type A neuroco A;Reference number: 809492; MUID:90235864; PMID:2185020 A;Accession: 809492
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Title: Molecular characterization of two forms of nontoxic-nonhemagglutinin compone A;Reference number: S67988; MUID:96096783; PMID:8521962
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: protein
A; Residues: 867-880;1148-1217, Y',1219 <GIM>
A; Residues: 867-880;1148-1217, Y', 1219 <GIM>
A; Residues: 867-880;1148-1217, Y', 1219 <GIM>
A; Residues: 867-880;1148-1217, Y', 1219 <GIM>
A; Dascinatial source: stracted from NCBI backbone (NCBIP:139159); sequence modified after R; Dascipta, B.R.; Dekleva, M.L.
Biochimie 72, 661-664, 1990
A; Title: Botulinum neurotoxin type A: sequence of amino acids at the N-terminus and a A; Accession: A60025; MUID:91120847; PMID:2126206
A; Accession: A60025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      42,
A;Cross-references: GB:M30196; NID:g144864; PIDN:AAA23262.1; PID:g144865
A;Experimental source: strain 62A, subtype A
R:Thompson, D.E.; Brehm, J.K.; Oultram, J.D.; Swinfield, T.J.; Shone, C.C.; Atkinson,
Eur. J. Biochem. 189, 73-81, 1990
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A.Accession: A27000
A.Molcoule type: protein
A.Residues: 2-47 cDAS2>
R.Binz, T.; Blasi, J.; Yamasaki, S.; Baumeister, A.; Link, E.; Suedhof, T.C.; Jahn,
J. Balol. Chem. 269, 1617-1620, 1994
A.;Title: Proteolysis of SMAP-25 by types E and A botulinal neurotoxins.
A.;Reference number: A49708; MUID:94124495; PMID:8294407
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          C; Comment: Botulinum neurotoxins inhibit neurotransmitter release from cholinergic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      45,
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R;Gimenez, J.A.; DasGupta, B.R.
J. Protein Chem. 12, 351-363, 1993
A;Title: Botulinum type A neurotoxin digested with pepsin yields 132, 97, 72, A;Reference number: A53884; MUID:94000342; PMID:8397793
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A, Modecule type: protein
A, Residues: 2-6;445-453, 'X',455-457 <DAS1>
R, DasGupta, B.R.; Foley, J.; Niece, R.
Biochemistry 26, 4162, 1987
A, Title: Partial sequence of the light chain of botulinum neurotoxin type A.
A, Reference number: A27000
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A; Residues: 1, 'Q', 3.26, 'V', 28-1296 <THO>
A; Cross-references: EMBL:X52066; NID:q40381; PIDN:CAA36289.1; PID:g40382
A; Experimental source: NCTC 2916
B; Füjita, R.; Fujinaqa, Y.; Inoue, K.; Nakajima, H.; Kumon, H.; Oguma, K.
FEBS Lett. 376, 41-44, 1995
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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OM protein - protein search, using sw model

September 24, 2003, 17:30:06; Search time 13.0166 Seconds (without alignments) 273.361 Million cell updates/sec Run on:

Perfect score: Title:

US-09-848-834A-14 200 1 XHWSYGLRPGSSGPSLFNNFTVSFWLRVPKVSASHLE 37 Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283308 segs, 96168682 residues Searched: Total number of hits satisfying chosen parameters:

283308

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

pirl:* pir2:* pir3:* PIR_76:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		dК			SUMMARIES	
Result No.	Score	Query	Length	DB	ID	Description
1	114	57.0	-	н	BICLIN	υ
7	67	33.5	П	7	S39791	neurotoxin - Clost
e	65	32.5	1296	П	BTCLAB	bontoxilysin (EC 3
4	64	32.0		7	S33411	botulinum neurotox
2	64	32.0		7	140631	non-proteolytic bo
9	63	31.5		7	S48109	neurotoxin type F
7	63	31.5		7	140813	neurotoxin type F
ω	63	31.5	-	~	A48940	bontoxilysin (EC 3
6	62	31.0	П	~	140645	botulinum neurotox
10	61	30.5		7	S48110	neurotoxin type F
11	59	29.5		7	178541	gonadoliberin prec
12	59	29.5		Н	RHHUG	
13	58	29.0		Н	RHPGG	
14	58	29.0		Н	RHSHG	•
15	58	29.0		~	151423	gonadoliberin prec
16	58	29.0		-	RHMSG	gonadoliberin prec
17	58	29.0		Н	RHRTG	
18	57.5	28.7		Н	VVVP24	
19		28.3		ď	I50739	gonadotropin-relea
20	56	28.0		7	I50644	gonadoliberin I pr
21	56	28.0	367	7	S48106	
22	56	28.0		7	JH0256	botulinum neurotox
23	56	28.0		7	S21178	botulinum neurotox
24	56	28.0		7	S46431	botulinum neurotox
25	26	28.0		7	A49777	botulinum neurotox
26	4	27.3		7	JC7393	
27	54.5	27.3		Н	MNVUWC	nonstructural prot
28	S	27.0		Н	RHAQ1	gonadoliberin I -
29	53.5	26.8		7	AD1669	3'-exo-deoxyribonu

nucleocapsid prote toxin, nontoxic co	botulinum neurotox	3'-exo-deoxyribonu	hypothetical prote	hypothetical prote	nonstructural prot	aspartate kinase (spermatogenesis re	Smcx protein (esca	SMCX protein - hum	probable proline t	hypothetical prote	5-methyltetrahydro	hypothetical prote
S23158 J01467	S46430	S/U582 AF1297	AB2018	T18703	MNVUW1	T04752	148776	148775	154361	D84782	F90257	AI3471	T27498
2.0	7	7 0	7	~	-	7	7	7	7	7	7	7	7
449	1196	251	1999	210	467	916	564	1033	1560	436	637	1261	230
26.5	26.5	26.5	26.3	26.0	26.0	26.0	25.8	25.8	25.8	25.5	25.5	25.5	25.2
533	53	52.5	52.5	52	52	52	51.5	51.5	51.5	51	. 51	. 51	50.5
30	32	34	35	36	37	38	39	40	41	42.	43	44	45

ALIGNMENTS

 RESULT 1 BTCLIT 1 BTCLIT 1 BTCLIT 1 N;Alternate names: tetanus neurotoxin c;Species: clostridium tetani C;Species: clostridium tetani C;Date: 31-Mar-1988 #sequence_revision 31-Mar-1988 #text_change 03-Jun-2002 C;Accession: A25689; A25757; A25194; B25194; A60759; S69348; S09364 B;Eisel U J; Jarausch, W.; Goretzki, K.; Henschen, A.; Engels, J.; Weller, U.; Huchel,
 ATILD: Tetanus toxin: primary structure, expression in E. coli, and homology with A; Reference number: A25689; MUD:87053814; PMID:3536478 A; Reference number: A25689; MUD:87053814; PMID:3536478 A; Molecule type: DNA A; Residues: 1-1315 < EIS> A; Cross-references: GB:X04436; NID:940769; PIDN:CAA28033.1; PID:940770
 R;Fairweather, N.F.; Lyness, V.A. Nucleic Acids Res. 14, 7809-7812, 1986 A;Title: The complete nucleotide sequence of tetanus toxin. A;Reference number: A25757; MUID:87040747; PMID:3774547 A;Accession: A25757 A;Molecule type: DNA A;Residues: 1-1135 CFAIS A;Accessidues: 1-1135 CFAIS A;Acces-reference CB-X06214. NID:440773. DIDN.CAA29564 1. DID:440774
 A)CIOSSTRETECHOES: USINOZILA, NIDUSQ40//5; FILN:CAL29304.1; FILU:940//4 R)Experimental source: strain CN3011 R):Fairweather, N.F.; Lyness, V.A.; Pickard, D.J.; Allen, G.; Thomson, R.O. J. Bacteriol. 165, 21-27, 1986 A)Title: Cloning, nucleotide sequencing, and expression of tetanus toxin fragment : A; Reference number: A25194; MUD:86085672; PMID:3510187 A)Molecule type: DNA
A; Residues: 743-1315 <fa2> A; Cross references: GB:M12739; NID:g144920; PIDN:AAA23282.1; PID:g144921 A; Accession: B25194 A; Molecule type: protein A; Residues: 865-894 <fr3> R; Matsuda, M.; Lei, D.L.; Sugimoto, N.; Ozutsumi, K.; Okabe, T. Infect. Immun. 57, 3588-3593, 1989 A; Title: Isolation, purification, and characterization of fragment B, the NH-2-termit</fr3></fa2>
 A; Reference munder: A007.39; MOLD: 3003.450; FALD: 247.0470 A; Rocession: A60759; MOLD: 3003.450; FALD: 247.0470 A; Rocession: A60759 A; Molecule type: protein B; Redidues: 461.475 - AM72- A; Tenzavecchia, L.; Eisel, U.; Niemann, H.; Widmann, C.; Corradin, G. J. Immunol. 142, 394.402, 1989 A; Title: Delineation of several DR-restricted tetanus toxin T cell epitopes. A; Reference number: 350098; MUID: 89093918; PMID: 2463305 A; Contents: annotation: epitope region B; Schiavo, G.; Benfenati, F.; Poulain, B.; Rossetto, O.; de Laureto, P.P.; DasGuptz, Nature 359, 832-835, 1992 A; Title: Tetanus and botulinum—B neurotoxins block neurotransmitter release by prctee A; Reference number: S27125; MUID: 93063293; PMID: 1331807 A; Contents: annotation

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A Okubo K., Suetake H., Aida K.;

A Okubo K., Suetake H., Aida K.;

A Spicing variant for the prepro-mammalian gonadotropin-releasing

"A spicing variant for the prepro-mammalian gonadotropin-releasing

"A spicing variant for the prepro-mammalian gonadotropin-releasing

"A spicing variant for the Bresch in the brain and various

peripheral tissues of the Japanese eel.";

Lool. Sci. 16:645-651(1999).

- - FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS (BY

SIMILARITY).

C -1 SIMILARITY: BELONGS TO THE GNRH FAMILY.

REMBL; ABA026991: BAA83597.1;

REMBL; ABO26991: BAA83597.1;

REMBL; ABO26091: GNRH.

REMBL; ABO26091: GNRH.
                                                                          "Expression of two gonadotropin-releasing hormone (GnRH) precursor genes in various tissues of the Japanese eel and evolution of GnRH."; Zool. Sci. 16:471-478(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stewart A.R., Lednicky J.A., Butel J.S.; "Sequence analyses of human tumor-associated SV40 DNAs and SV40 viral isolates from monkeys and humans."; J. Neurovirol. 4:182-193(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Tissue culture adaptation of natural isolates of simian virus 40: changes occur in viral regulatory region but not in carboxy-terminal domain of large T-antigen.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Viral coat protein 3.
Simian virus 40 (SV40).
Viruses; dsDNA viruses, no RNA stage; Polyomaviridae; Polyomavirus.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 13; Length 91;
1.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=VA45-54-1, and VA45-54-2;
Lednicky J.A., Stewart A.R., Butel J.S.;
Submitted (JUN-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                           GNRH ASSOCIATED PEPTIDE.
BA15C9DC08434A7B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29.0%; Scor.
100.0%; Pred. No. ...
                                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
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MEDLINE=97368433; PubMed=9225047;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN=VA45-54-2;
MEDLINE=98244346; PubMed=9584955;
                                                                                                                                                                                                                                                                                                                                                                PRINTS; PR01541; GONADOLIBRNI. PROSITE; PS00473; GNRH; 1.
                                                               Okubo K., Suetake H., Aida K.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              01-NOV-1999 (TrEMBLrel. 12, 01-NOV-1999 (TrEMBLrel. 12, 01-OCT-2001 (TrEMBLrel. 18,
                                                                                                                                                                                                                                                                                                                                                                                                                                                             9893 MW;
                                                                                                                                                                                                                                                                                                                                                                                                Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lednicky J.A., Butel J.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gen. Virol. 78:0-0(0).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00446; GnRH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 HWSYGLRPG 10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
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                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                           91 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10633;
 NCBI_TaxID=7937;
                                                  rissue=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE
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Best Local 9
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-MAY-2002 (TrEMBLrel. 22, Last annotation update)
01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
Prepro-mGnRH precursor (Gonadoliberin) (Gonadotropin-releasing
hormone) (LH-RH) (Luliberin)
Anguilla japonica (Japanese eel).
Bukaryota: Metazoa: Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Anguilliformes; Anguillidae;
Anguilla.
                                                                                                                                                                                                                                                                                                                                                 "Cloning and characterization of cDNAs encoding the GnRH1 and GnRH2
                                                                                                                                                                                                                                                                                                                                                                                                       SIMILARITY).

-I SUBCELLULAR LOCATION: SECRETED.

-I TISSUE SPECIFICITY: FOREBRAIN.

-I TISSUE SPECIFICITY: FOREBRAIN.

-I DEVELOPHENTAL STAGE: EXPRESSED AT SIGNIFICANTLY HIGHER LEVELS DURING POST-BREEDING. NOT EXPRESSED IN PITUITARY.

-I SIMILARITY: BELONGS TO THE GNRH FAMILY.

-I SIMILARITY: AALOS972.1;

-I SIMILARITY: AALOS972.1;

-InterPro; IPR004012; GonadoliberinI.
                                                          01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LHRH I)
(Lutelnizing hormone releasing hormone I) (Gonadotropin releasing
hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I
                                                                                                                                                                              Rana catesbeiana (Bull frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana
NCBI_TaxID=8400;
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AMIDATION (G-35 PROVIDE AMIDE GROUP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRINTS; PR01541; GONADOLIBRNI.
PROSTTE: PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Signal;
Pyrcolidone carboxylia acid.
                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A., TISSUE SPECIFICITY, AND DEVELOPMENTAL STAGE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                                  Wang L., Yoo M.S., Kang H.M., Im W.B., Choi H.S., Bogerd J.,
Kwon H.B.;
                                                                                                                                                                                                                                                                                                                                                              precursors from bullfrog (Rana catesbeiana).";
J. Exp. Zool. 289:190-201(2001).
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 13; Length 90; 1.2;
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317203B4E3DA2FE7 CRC64;
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PROGONADOLIBERIN I.
GONADOLIBERIN I.
                             90 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 58; DB 1; Pred. No. 1.2; 0; Mismatches
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                                PRT;
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                                                                                                                                                                                                                                                                                   TISSUE=Forebrain; MEDLINE=21102951; PubMed=11170016;
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100.0%;
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les 9; Conserv
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25
38
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PEPTIDE
PEPTIDE
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RESULT 13
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Q57236
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDINE-9412259; PALOES 7764370; MEDINE-9412259; PALOES 7764370; Hutson R.A., Collins M.D., East A.K., Thompson D.E.; Hutson Collins M.D., East A.K., Thompson D.E.; Nucleotide sequence of the gene coding for non-proteolytic clostridium botulinum type B neurotoxin: comparison with other clostridial neurotoxins."; Curr. Microbiol. 28:101-110(1994). EMBL; X71343; CAA50482.1; -. HSSP; P10845; 3BTA.
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DB 2; Length 1291;
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                                               1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Print: PF01742; Peptidase_MZ7; 1.
PRINTS; PR00760; BONTOXILYSIN.
Prodom: PD001963; BONTOXILYSIN.
PROSITE; PS001042; XINC_PROTEASE; 1.
SEQUENCE 1291 AA; 150513 MW; 71BCAFE23D69FAAA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        botulism.";
Submitted (APR-2002) to the EMBL/GenBank/DDBJ databases.
EMBL; AB084152; BAC22064.1; -.
SEQUENCE 1291 AA; 150574 MW; 0227CAEF4F58504D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1; Indels
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01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                              Last sequence update)
Last annotation update)
                                                                                                                                                                                                                               1291 AA.
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                                               Mismatches
    Score 64;
Pred. No. 3
                                                                                                                                                                                                                                                                             Created)
                                                                                                                                                                                                                               PRT;
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InterPro; IPR000395; Bontoxilysin.
InterPro; IPR006025; Zn_MTpeptdse.
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921 SMFLDFSVSFWIRIPK 936
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921 SMFLDFSVSFWIRIPK 936
  32.0%;
62.5%;
                                                                                   15 SLFNNFTVSFWLRVPK 30
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STRAIN-Eklund 17B ATCC25765;
                                                                                                                                                                                                                                                                      01-NOV-1996 (TrEMBLrel. 01, 01-NOV-1996 (TrEMBLrel. 01, 01-MAR-2003 (TrEMBLrel. 23,
  Query Match 32.0°
Best Local Similarity 62.5°
Matches 10; Conservative
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nes 10; Conserv
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Q8GR96;
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Q08077
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Matches
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Q8GR96
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MEDLINE=94013372; PubMed=8408542;
Campbell K., East A.K., Collins M.D.;
"Gene probes for identification of the botulinal neurotoxin gene and specific identification of neurotoxin types B, E, and F.";
J. Clin. Microbiol. 31:2255-2262(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=LANGELAND;
MEDLINE=98404102; PubMed=9732534;
Bast A.K., Bhandari M., Hielm S., Collins M.D.;
"Analysis of the botulinum neurotoxin type F gene clusters in
Proteolytic and nonproteolytic Clostridium botulinum and Clostridium
barati.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                 Gaps
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Clostridium.
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  Length 1291;
                                                 1; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
STRAIN-NCTC 10281,
HUtson R.A., COllins M.D.;
Submitted (AUG-1995) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Elmore M.J., Bodsworth N.J., Whelan S.M., Minton N.P.; Submitted (AUG-1994) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                         01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-NAR-2003 (TrEMBLrel. 23, Last annotation update)
BOtulinum neurotoxin type F (BONT/F protein).
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Pred. No. 8.2;
5; Mismatches
32.0%; Score 64; DB 2; 62.5%; Pred. No. 3.1;
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                                                 Mismatches
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InterPro; IPR006025; Zn_Mrpeptdse.
Pfam; PF01742; Peptidase_MZ7; 1.
PRINTS; PR00760; BONTOXILYSIN.
ProDom; PD001963; Bontoxilysin; 1.
PROSITE; PS00142; ZINC_PROTEASE; 1.
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EMBL, X81714; CAA57358.1; -

EMBL; 135496; AAA23210.1; -

EMBL; X70821; CAA50152.1; -

EMBL; X99064; CAA67512.1; -

HSSP; P10845; 3BTA.
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1028;
                                                                                                                           30.5%;
57.1%;
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931 YQNFSISFWVRIPK 944
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 1-27 FROM N.A.
                                                                                                15 SLFNNFTVSFWLRVPK
                                               10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Clostridium botulinum.
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Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=1491;
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1291 AA; 150843 MW; 7AC1737B0FA5A151 CRC64;
                        15 SLFNNFTVSFWLRVPK 30
                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=1491;
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NCBI_TaxID=1491;
                                                                                                                                                                                   093G71;
01-DEC-2001 (
01-DEC-2001 (
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01-DEC-2001 (
01-MAR-2003 (
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                                                                                                                                                                                                                                                                                                                            Clostridium
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SEQUENCE
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Q933K0;
                                                                                                                                                                 093G71
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                                                                                                                          RESULT
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                                                                                                                                                                                                                                                                                                                                        "Nucleotide sequence of the gene coding for Clostridium barati type neurotoxin: Comparison with other clostridial neurotoxins."; FEMS microbiol. Lett. 108:175-182(1993).
HSSP; p10845; 3BTA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDIME=98440323; PubMed=9767710;
Santos-Buelga J., Collins M.D., East A.K.;
"Characterization of the genes encoding the Botulinum neurotoxin
complex in a strain of clostridium botulinum producing type B & F
                                                                                                                                                                           Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae; Clostridium.
                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
MEDLINE-93252228; Pubmed-8486245;
Thompson D.E., Hutson R.A., East A.K., Allaway D., Collins M.D.,
Richardson P.T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Prodom; PD001563; Britani; 1.
PROSITE; PS00142; ZINC_PROTEASE; 1.
SEQUENCE 1268 AA; 145513 MW; 963040091AC15ED2 CRC64;
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PROSITE; PS00142; ZINC_PROTEASE; 1.
SEQUENCE 1291 AA; 150840 MW; E4D3B0E46AB2E735 CRC64;
                                                                                Last sequence update)
Last annotation update)
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Last annotation update)
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                        PRT; 1268 AA.
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5; Mismatches
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                                                              Created)
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EMBL; X13630; CAA73968.1; --
HSSP; P10845; 3BTA.
InterPro; IPR000395; Bontoxilysin.
InterPro; IPR006025; Zn_MTpeptdse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro, IPR000395; Bontoxilysin.
InterPro, IPR006025; Zn_MTpeptdse.
Pfam; PF01742; Peptidase_M27; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pfam; PF01742; Peptidase_M27; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SLFNNFTVSFWLRVPK 30
                                                           01-NOV-1996 (TrEMBLrel. 01,
01-NOV-1996 (TrEMBLrel. 01,
01-MAR-2003 (TrEMBLrel. 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-MAY-1999 (TrEMBLrel. 10, 01-MAY-1999 (TrEMBLrel. 10, 01-MAR-2003 (TrEMBLrel. 23,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 32.0
Best Local Similarity 62.5
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRELIMINARY;
                  Q45851 PRELIMINARY;
Q45851;
01-NOV-1996 (TrEMBLrel.
                                                                                                                                                               Clostridium baratii.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                       Neurotoxin type F.
                                                                                                                                                                                                                       NCBI_TaxID=1561;
                                                                                                                                                                                                                                                                                                                                                                                                                                            MEROPS; M27.002;
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Best Local Simi
Matches 10;
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045851
                        A PAC O O C O O C O O C O O C O O C O O C O O C O O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C O C 
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Kirma N., Ferreira J.L., Baumstark B.R.; "Characterization of six type A strains of Clostridium botulinum that contain type B toxin gene sequences.";
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Type B cryptic neurotoxin.
Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
                                                                                                                                                                                                                                                                                                                                       Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AF29526; AAK97132.1; -
EMBL; AF29526; AAK97132.1; -
InterPro; IPR000395; Bonnoxilyain.
InterPro; IPR0006025; Zn, MTpeptdse.
PRINTS; PR00760; BONTOXILYSIN.
PRODOM; PR001963; BontoXILYSIN.
PRODOM; PR001963; BontoXILYSIN.
PROSITE; PS00142; ZINC_PROTEASE; 1.
SEQUENCE 1291 AA; 150824 MW; D7CA07BAEZEB8CD2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    contain type B toxin gene sequences.";
Submitted (ANG-2000) to the EMBL/GenBank/DDBJ databases.
EMBL; AF300465; AALI1499.1;
EMBL; AF300465; AALI1498.1;
InterPro; IPR00395; Bontoxilysin.
InterPro; IPR006025; Zn_WTpeptdse.
Pfam; PF01742; Peptidase_M27; 1.
PRINTS; PR00760; BONTOXILYSIN.
PRODOM; PD001963; BONTOXILYSIN; 1.
PROSITE; PS00142; ZINC_PR0TEASE; 1.
                                                                                                                                                                                                                                              01-DEC-2001 (TrEMBLrel. 19, Last sequence update) 01-MAR-2003 (TrEMBLrel. 23, Last annotation update) Neurotoxin type B.
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Last annotation update)
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                                                                                                                                                                  PRT; 1291 AA
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921 SMFLDFSVSFWIRIPK 936
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921 SMFLDFSVSFWIRIPK 936
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19,
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Best Local Similarity 62.5
Matches 10; Conservative
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361 AA

PRT;

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PRELIMINARY;
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            045846;
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Matches
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MEDLINE=94013372; PubMed=8408542;
MEDLINE=94013372; PubMed=8408542;
Campbell K., East A.K., Collins M.D.;
"Gene probes for identification of the botulinal neurotoxin gene and specific identification of neurotoxin types B, E, and F.";
J. Clin. Microbiol. 31:2255-2262(1993).
HSSP: P10845; 3BTA.
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                 Tetanus toxin (Fragment).
Clostridium tetani.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
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                                                                                                                                                                                                                                                                             Length 1310;
                                                                                            Shumin 2., Dianliang L.;
Shumin 2., Dianliang L.;
Shumin 2., Dianliang L.;
Cloning and sequence analysis of tetanus toxin gene.";
Submitted (UUN-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF389424; AAK72964.2; -
InterPro; IPR000395; Bontoxilysin.
InterPro; IPR001064; Crystallin.
InterPro; IPR0006025; Carallin.
InterPro; IPR0006025; Carallin.
InterPro; IPR00760; Bontoxilysin.
INTERPRO; PR00760; Bontoxilysin. 1.
PROSITE; PS00125; CRYSTALLIN_BEPRAGAMMA; 1.
PROSITE; PS00142; ZINC_PROTEASE; 1.
NON_TER 1310 1310
SEQUENCE 1310 AA; 150316 MW; 9EADDC914418E450 CRC64;
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                                                                                                                                                                                                                                                                            57.0%; Score 114; DB 2; Length 13
95.5%; Pred. No. 2.2e-07;
Live 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                      1310 AA; 150316 MW; 9EADDC914418E450 CRC64;
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42131 MW; AZEOFFFC81F9533D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-1996 (TrEMBLrel. 01, Last sequence update) 01-OCT-2000 (TrEMBLrel. 15, Last annotation update) Botulinum neurotoxin type B (Fragment).
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                    361 AA.
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Matches 10; Conservative
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nes 21; Conservative
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361
361 AA;
                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                               NCBI_TaxID=1513;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=1491;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clostridium.
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NON_TER
SEQUENCE
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"Gene probes for identification of the botulinal neurotoxin gene and specific identification of neurotoxin types B, E, and F.";
J. Clin. Microbiol. 31:2255-2262(1993).
EMBL: X70814; CAA50145.1; -.
HSSP: P10845; 3BTA.
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J. Cell Sci. 112:2715-2724(1999).
EMBL; AJ242628; CAB43706.1;
HSSP; P10845; 3BTA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Lalli G., Herreros J., Osborne S.L., Montecucco C., Rossetto O., Schiavo G.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae; Clostridium.
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441 AA; 52772 MW; 721D0B468E8C95A4 CRC64;
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01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
                          Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32.0%; Score 64; DB 2; 62.5%; Pred. No. 0.96; Live 5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 64; DB 2;
Pred. No. 0.77;
5; Mismatches
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01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequen
01-NOV-1996 (TrEMBLrel. 11, Last annotation)
01-CCT-2000 (TrEMBLrel. 15, Last annotation)
Botulinum neurotoxin type B (Fragment).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE=99343691; PubMed=10413679;
                                                                                                                                                                                                                                                            STRAIN=type B;
MEDLINE=94013372; Pubmed=8408542;
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288 SMFLDFSVSFWIRIPK 303
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62.5%;
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                                                                                                                 Clostridium botulinum
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Matches 10; Conserv
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RESULT

RESULT Q45846 simian viru Q910v5 simian viru

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Q9zaj5 Clostridium Q9zaj5 Clostridium Q45862 clostridium Q9k395 clostridium Q9kam3 clostridium Q9far6 clostridium Q93ht3 clostridium Q93ht3 clostridium Q93ht3 clostridium Q93kt2 comato spot Q9jak2 tomato spot Q9jak2 clostridium Q9jak4 clostridium Q9jak4 clostridium Q9jak4 clostridium Q9jak4 clostridium Q9jak1 clostridium Q9jak1 clostridium Q9jak1 clostridium Q9jak1 clostridium Q9jak1 clostridium Q9jak1 clostridium

Q8jxi5 norwalk-lik Q8jxi4 norwalk-lik

us-09-848-834a-14.rspt

Sequence:

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Searched:

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Clostridium tetani.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
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Pred. No. 7e-08;
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He H.J., Shi H.J., He Z.Y., Yuan Q.S., Wu X.F.;
He H.J., Shi H.J., He Z.Y., Yuan Q.S., Wu X.F.;
"Fragment C of Tetanus Toxin.";
Submitted (MAY-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AF154828; AAF73267.1;
"HSSP; P4959; 1A8D.
InterPro; IPRO01064; Crystallin.
PROSITE; PS00225; CRYSTALLIN_BETAGAMMA; 1.
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Q98VM1
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Q910V5
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Q8JFY3
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Q45862
Q9K395
Q8KZM3
Q9FAR6
Q93HT3
Q903R6
Q8JIQ7
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Q92AM6
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1 Similarity 95.5%;
21; Conservative
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  NCBI_TaxID=1513;
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  SEQUENCE
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Q9LA13;
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                          GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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1 XHWSYGLRPGSSGPSLFNNFTVSFWLRVPKVSASHLE
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APPLICANT: MATSUDA, MOTINIZO
TITLE OF INVENTION: TETANUS TOXIN FUNCTIONAL FRAGMENT ANTIGEN AND TETANUS
TITLE OF INVENTION: VACCINE
TITLE OF INVENTION: VACCINE
FILE REFERENCE: 216-380P
CURRENT FILING DATE: 1997-11-24
SEQ ID NO 16
LENGTH: 858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-913-880C-15
Sequence 15, Application US/08913880C
Sequence 15, Application US/08913880C
Sequence 15, Application US/08913880C
Sequence 15, Application US/08913880C
TITLE OF INVENTION: VACINE
TITLE OF INVENTION: VACINE
FILE REFERENCE: 216-380P
CURRENT APPLICATION NUMBER: US/08/913,880C
CURRENT FLING DATE: 1997-11-24
SEQ 1D NO 15
LENGTH: 860
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US-08-913-880C-14
US-08-913-880C-14
Sequence 14, Application US/08913880C
Sequence 14, Application US/08913880C
GENERAL INFORMATION:
TITLE OF INVENTION: WACKINE
TITLE OF INVENTION: VACCINE
FILE REFERENCE: 216-380P
CURRENT APPLICATION NUMBER: US/08/913,880C
CURRENT FILING DATE: 1997-11-24
NUMBER OF SEQ ID NOS: 17
LENGTH: 862
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46.9%; Score 76; DB 4; Length 860;
Best Local Similarity 93.8%; Pred. No. 0.005;
Matches 15; Conservative 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                              Query Match 46.9%; Score 76; DB 4; Length 858; Best Local Similarity 93.8%; Pred. No. 0.005; Matches 15; Conservative 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                               ; OTHER INFORMATION: Amino Acids 458 to 1315 of SEQ ID NO: 1 us-08-913-880c-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Amino Acids 456 to 1315 of SEQ ID NO: 1 US-08-913-880C-15
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                                                                                                                                                                                                                                                                                                                                                                                                               16 LOYIKANSKFIGITEL 31
                                                                                                                                                                                                TYPE: PRT
ORGANISM: Clostridium tetani
FEATURE:
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46.9%; Score 76; DB 2;
84.2%; Pred. No. 0.00018;
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Pred. No. 0.0049;
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                                                                                                                                                                                                                                                                                                                                                                                  1151-4146 US2
                                CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/446,692
FILING DATE: 7-JUN-1995
CLASSIFICATION NUMBER: US 08/229,275
FILING DATE: 14-ARR-1994
CLASSIFICATION DATA:
APPLICATION NUMBER: US 08/229,275
FILING DATE: 14-ARR-1994
CLASSIFICATION WAFA:
APPLICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION UMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION UMBER: US 08/057,166
FILING DATE: 27-APR-1992
    US/08/488,351A
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                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: Maria C.H. Lin
REGISTRATION NUMBER: 29,323
REFERNCE/DOCKET NUMBER: 1151
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)415-8745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13 GPSLQYIKANSKFIGITEL 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17 GGKKQYIKANSKFIGITEL 35
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                     7-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: (516)751-6849
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LENGTH: 47 amino acids TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 93.8
Matches 15; Conservative
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Matches 16; Conservative
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MOLECULE TYPE: peptide
    APPLICATION NUMBER:
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                                                          APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
IITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
CORRESPONDENCE ADDRESS: 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 35, Application US/08488351A
Patent No. 584346
GENERAL INFORMATION:
APPLICANT: Ladd, Anna
APPLICANT: Zamb, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines NUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. 0.00018;
0; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ATTORNEY AGENT INFORMATION:
NAME: Maria C.H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-4146 US2
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212,415-8145)
INFORMATION FOR SEQ ID NO: 35:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/446,692
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
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Sequence 35, Application US/08446692
Patent No. 5759551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17 GGKKQYIKANSKFIGITEL 35
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                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
                                                                                                                                                                                                         ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
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STREET: 345 Park Avenue
CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 84.2%;
Matches 16; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
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                     Patent No. 5759551
GENERAL INFORMATION:
APPLICANT: Ladd, A
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10154-0053
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ZIP: 10154-0053
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Sequence 17, Application US/08913880C
Patent No. 6372225
GENERAL INFORMATION:
APPLICANT: MATSUDA, MOITHITO
TITLE OF INVENTION: VACCINE
FILE REFERENCE: 216-380P
CURRENT APPLICATION NUMBER: US/08/913,880C
CURRENT FILING DATE: 1997-11-24
NUMBER OF SEQ ID NOS: 17
                                         Gaps
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DB 2; Length 47;
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Sequence 638 Application US/08488351A
Patent No. 5843446
GENERAL INFORMATION:
APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
NUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS:
                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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Pred. No. 0.00014;
0; Mismatches 3; Indels
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MEDIUM TYRE: 105
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Datentin Release #1.0, Version #1.25
CURRENT PPLICATION DATA:
APPLICATION NUMBER: US/08/488,351A
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/446,692
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
PRIOR APPLICATION NUMBER: US 08/229,275
FILING DATE: 14-APR-1994
CLASSIFICATION NUMBER: US 08/229,275
FILING DATE: 27-APR-1992
CLASSIFICATION: 424
PRIOR APPLICATION: 424
PRIOR APPLICATION: 424
PRIOR APPLICATION NUMBER: US 08/229,275
FILING DATE: 27-APR-1992
CLASSIFICATION: 1424
ATTORNEV/AGENT INFORMATION:
NAME: Maria C.H. Lin
REGISTRATION: MUMBER: 29,323
REFERENATION: MUMBER: 29,323
REFERENATION: MUMBER: 29,323
    84.2%; Pred. No. 0.00014;
live 0; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REFERENCE/DOCKET NUMBER: 1151-4146 US2 TELECOMMUNICATION INFORMATION: TELEPHONE: (212)415-8745
                                                                                              13 GPSLQYIKANSKFIGITEL 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                13 GPSLQYIKANSKFIGITEL 31
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: (516)751-6849
INFORMATION FOR SEQ ID NO: 63:
                                                                                                                                                                                                                                                                                                                                                                                                                                                         3: Maria C.H. Lin
345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        . 46.9%;
    Best Local Similarity 84.2
Matches 16; Conservative
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Best Local Similarity 84.29
Matches 16; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: linear
MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE:
STREET: 34
                                                                                                                                                                                                        US-08-488-351A-63
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY:
STATE:
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APPLICANT: Ladd, Anna
APPLICANT: Ladd, Anna
APPLICANT: Mang, Chang Yi
APPLICANT: Mang, Chang Yi
APPLICANT: Mang, Chang Yi
APPLICANT: Zamb, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
NUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS:
ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
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                                                                                                                                                                                                                                                       Gaps
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0
                                                                                                                                                                                                          Length 37;
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Pred. No. 0.00014;
0; Mismatches 3; Indels
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CONDITY: US
ZIP: 10154-0053
ZIP: 10154-0053
ZIP: 10154-0053
COMPUTER: ENABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/488,351A
FILING DATE: 7-UN-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/446,692
FILING DATE: 7-UN-1995
CLASSIFICATION NUMBER: US 08/29,275
FILING DATE: 14-APR-1994
CLASSIFICATION NUMBER: US 08/25,166
FILING DATE: 14-APR-1994
REOR APPLICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ATTORNEY/AGENT INFORMATION:
NAME: Maria C.H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-4146 US2
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 57, Application US/08488351A
Patent No. 5843446
                                                                                                                                                                                                                                                                                                                     13 GPSLQYIKANSKFIGITEL 31
                         63:
                                                                                                                                                                                                   Query Match
Best Local Similarity 84.2%;
Matches 16; Conservative
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TELEPHONE: (516)751-6849
INFORMATION FOR SEQ ID NO: 57
SEQUENCE CHARACTERISTICS:
TELEFAX: (516)751-6849
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 37 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             37 amino acids
                                                                                    TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
US-08-446-692-63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ; MOLECULE TYPE: peptide US-08-488-351A-57
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US-08-488-351A-57
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-TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
NUMBER OF SEQUENCES: 114
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                                                                                                                                         COMPUTER RELAMBLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: ELAPPY disk
COMPUTER: ELAP PC compatible
COMPUTER: TEM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/446,692
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: MATIA C.H. Lin
REGISTRATION NUMBER: 29,323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
APPLICATION DATA:
APPLICATION NUMBER: US/08/446,692
FILING DATE: 7-JUN-1995
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Pred. No. 0.00014;
0; Mismatches 3;
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CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Maria C.H. Lin
REGISTRATION NUMBER: 29,323
REPERRENCE/JOCKET NUMBER: 1151-4146 US2
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)415-8745
                                                                                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 1151-4146 US2 TELECOMMUNICATION INFORMATION: TELEPHONE: (212)415-8745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 63, Application US/08446692
Patent No. 575551
GENERAL INFORMATION:
APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CORRESPONDENCE ADDRESS:
ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
CITY: New York
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Best Local Similarity 84.2%;
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (516)751-6849
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (516)751-6849 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; MOLECULE TYPE: peptide US-08-446-692-57
    CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         amino acid
                                                                                                          RY: US
10154-0053
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ZIP: 10154-0053
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY:
                                                                                    STATE: N
COUNTRY:
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APPLICANT: Mang, Chang Yi
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timethy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
NUMBER OF SEQUENCES: 114
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                                                                                       Gaps
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                                           Length 17;
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93.8%; Pred. No. 0.00011;
'' "" " " " " inatches 0; Indels
                                       46.9%; Score 76; DB 5; Length 17; llarity 93.8%; Pred. No. 5.7e-05; Conservative 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30B
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US93/11703
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/984,852
FILING DATE: 02-DEC-1992
ATTORNEY/AGENT INFORMATION:
NAME: Green, Grant D.
REGISTRATION NUMBER: 31,259
REFERENCE/DOCKET NUMBER: 0222.101
TELECOMMUNICATION INFORMATION:
TELECHANS: 510-655-3542
                                                                                                                                                                                                                                                                     Sequence 63, Application PC/TUS9311703
GENERAL INFORMATION:
APPLICANT: Chiron Mimotopes Pty. Ltd.
TITLE OF INVENTION: T-Cell Epitopes
NUMBER OF SEQUENCES: 75
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              UMBER: PCT/US93/11703
28-DEC-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 57, Application US/08446692
Patent No. 5759551
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Grant D. Green
STREET: 4560 Horton St.
CITY: Emeryville
                                                                                                                                               9 MOYIKANSKFIGITEL 24
                                                                                                                           16 LQYIKANSKFIGITEL 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16 LQYIKANSKFIGITEL 31
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 31 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 46.9%
Best Local Similarity 93.8%
Matches 15; Conservative
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STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
                                         Query Match
Best Local Similarity
Matches 15; Conservat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TOPOLOGY: linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           94608
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PCT-US95-08596-23
                                                                                                                                                                                                                                                 PCT-US93-11703-63
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US-08-446-692-57
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FCT-US95-08596-23

Sequence 23, Application PC/TUS9508596

GENERAL INFORMATION:

APPLICANT:
TITLE OF INVENTION: and Treating Type I Diabetes
TITLE OF SEQUENCES: 23

CORRESPONDENCE ADDRESS:

ADDRESSEE: LAHIVE & COCKFIELD

STREET: 60 State Street, suite 510

CITY: DESCONDENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 76; DB 4; Pred. No. 5.7e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
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NAME: Deconti, Giulio A., Jr.
REGISTRATION NUMBER: 31,503
REFRENCE/POCKET NUMBER: DCI-092PC
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
TELEFAX: (617)227-5941
INFORMATION FOR SEQ ID NO: 23:
CLASSIFICATION: 435
PRIOR APPLICATION 1435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/272,220
FILING DATE: 08-JULY-1994
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: DECONTI, GIULIO A., Jr.
REGISTRATION NUMBER: 31,503
REFERENCE/DOCKET NUMBER: DCI-092DV
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION SEQ. ID NO: 23:
SEQUENCE CHARACTERISTICS:
TENTYH: 17 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: USA
ZIF: 02109-1875
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/08596
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US 08/272,220
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16 LOYIKANSKFIGITEL 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08
FILING DATE: 08-JULY-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LENGTH: 17 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 46.9
Best Local Similarity 93.8
Matches 15; Conservative
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LENGTH: 17 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ) MOLECULE TYPE: peptide
) FRAGMENT TYPE: internal
US-08-472-701-23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MOLECULE TYPE: peptide FRAGMENT TYPE: internal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Massachusetts
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 0:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TOPOLOGY:
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STATE: Ma
COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       QQ
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Patent No. 6509165
GENERAL INFORMATION:
APPLICANT: Griffin, Ann C.
TITLE OF INVENTION: Detection and Treatment Methods for TITLE OF INVENTION: Type I Diabetes
NUMBER OF SEQUENCES: 23
CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
STREET: 60 State Street, suite 510
CTY: Moston
STATE: Massachusetts
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 51.9%; Score 84; DB 5; Length 24; Best Local Similarity 77.3%; Pred. No. 5.3e-06; Matches 17; Conservative 1; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                           CURRENT APPLICATION DATA:
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US92/07218
FILING DATE: 19920826
CLASSIFICATION: 424
PROOF APPLICATION TATA:
APPLICATION NUMBER: DC7/US92/07218
FILING DATE: 26-AUG-1991
PRIOR APPLICATION NUMBER: 26-AUG-1991
PRIOR APPLICATION NUMBER: 20 7/827,682
FILING DATE: 29-JAN-1992
PRIOR APPLICATION NUMBER: US 07/827,682
FILING DATE: 29-JAN-1992
ATPORNEY/AGENT INFORMATION:
REGISTRATION NUMBER: US 07/874,491
FILING DATE: 27-APR-1992
ATPORNEY/AGENT INFORMATION:
REGISTRATION NUMBER: 130,223
REGISTRATION NUMBER: 14137-26-3
TELECOMMUNICATION INFORMATION:
TELEFRAX: 415-326-2400
                                  One Market Plaza, Steuart Street Tower
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMMITTER TO SEA TO SEA
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   Townsend and Townsend
                                                                                                                                                                                                                         MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9 PGSSGPSLQYIKANSKFIGITE 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    INFORMATION FOR SEO ID NO: 31:
SEQUENCE CHARACTERISTICS:
LENGTH: 24 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MOLECULE TYPE: protein
                                                                                                                                                                                              COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                  STREET: One Market F
CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: AMINO ACID
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   ADDRESSEE:
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                                                                                                                                 COUNTRY:
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Gaps

55, Appl 4, Appli 40, Appli 7, Appli 13, Appli 13, Appli 8, Appli 32, Appli 13, Appli 13, Appli 14, Appli 14, Appli 14, Appli 14, Appli

Scoring table:

Searched:

Database

Result Š.

Perfect score:

Run on:

Sednence:

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APPLICANT: Vitiello, Maria
APPLICANT: Chesulu, Robert
TITLE OF INVENTION: HLA-RESTRICTED HEPATITIS B VIRUS CTL
TITLE OF INVENTION NUMBER: US/08/464,496
CURRENT APPLICATION NUMBER: 07/935,811
PRIOR PILING DATE: 1992-04-27
PRIOR PILING DATE: 1992-04-27
PRIOR PAPLICATION NUMBER: 07/749,568
PRIOR FILING DATE: 1992-01-26
PRIOR FILING DATE: 1991-08-26
NUMBER OF SEQ ID NOS: 75
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 31
LENTING APPLICATION
LINE CONTRACTOR TO THE CONTRAC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
APPLICANT: Vitiello, Maria A.
APPLICANT: Vitiello, Maria A.
APPLICANT: OF INVENTION: HLA-RESTRICTED HEPATITIS B VIRUS CTL
TITLE OF INVENTION: EPITOPES
NUMBER OF SEQUENCES: 35
CORRESPONDENCE ADDRESS:
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Pred. No. 5.3e-06;
1; Mismatches 4; Indels
                                                    ALIGNMENTS
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Patent No. 332789
GENERAL INFORMATION:
APPLICANT: Epimmune, Inc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Oligopeptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT
ORGANISM: Artificial Sequence
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Best Local Similarity 77.3%;
Matches 17; Conservative
RESULT 2
PCT-US92-07218-31
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US-08-464-496-31
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                                                                                                                                                                                                                           September 24, 2003, 16:46:20; Search time 9.18836 Seconds (without alignments) 142.750 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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2: /cgn2_6/ptodata/1/laa/5B_COMB.pep:*
3: /cgn2_6/ptodata/1/laa/6A_COMB.pep:*
5: /cgn2_6/ptodata/1/laa/6B_COMB.pep:*
5: /cgn2_6/ptodata/1/laa/PCTUS_COMB.pep:*
6: /cgn2_6/ptodata/1/laa/PCTUS_COMB.pep:*
                               GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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PCT-US95-08596-23
PCT-US95-11703-63
US-08-446-692-57
US-08-446-692-63
US-08-488-351A-57
US-08-488-351A-63
US-08-488-351A-35
US-08-913-880C-14
US-08-913-880C-12
US-08-913-880C-13
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US-08-913-880C-1
US-08-319-704-10
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1 XHWSYGLRPGSSGPSLQYIKANSKFIGITEL
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US-09-102-716-6
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Maximum Match 100%
Listing first 45 summaries
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Gapop 10.0 , Gapext 0.5
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Maximum DB seq length: 2000000000
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                              Gaps
                                                                                                                                                                                                                                                                                   Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelloration of asthma or other chronic allergic
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Ouery Match 50.0%; Score 81; DB 21; Length 116; Best Local Similarity 76.2%; Pred. No. 0.00045; Matches 16; Conservative 3; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  50.0%; Score 81; DB 21; Length 116; 76.2%; Pred. No. 0.00045; Live 3; Mismatches 2; Indels
                                                                                                                                                                                                                                                       Modified murine interleukin-5 SEQ ID NO: 52.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Disclosure; Page 159-160; 172pp; English.
                                                                                                                                                                AAB45526 standard; Protein; 116 AA.
                                                      11 SSGPSLQYIKANSKFIGITEL 31
                                                                           11 SSGPSLQYIKANSKFIGITEL 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                               99DK-0000552.
99US-0132811.
                                                                                                                                                                                                                                                                                                                                                                                                                                   19-APR-2000; 2000WO-DK00205.
                                                                                                                                                                                                                          (first entry)
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Best Local Similarity 76.2
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2000-672791/65.
N-PSDB; AAC68879.
                                                                                                                                                                                                                                                                                                                                              Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 116 AA;
                                                                                                                                                                                                                                                                                                                                                                         WO200065058-A1.
                                                                                                                                                                                                                                                                                                                                 Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                23-APR-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              06-MAY-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             conditions -
                                                                                                                                                                                                                        26-FEB-2001
                                                                                                                                                                                                                                                                                                                                                                                                       02-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Klysner S;
                                                                                                                                                                                           AAB45526;
                                                                                                                                   RESULT 15
AAB45526
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Search completed: September 24, 2003, 17:40:06 Job time : 35.036 secs

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prevention or treatment of a self-protein-mediated pathology. The
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                                                                                                                                                                                                                                                                                                                                                           AAB45502;
                                                                                                                                                                                                Query Match
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                                                                                                                                                                                                                                                                     Dp
                                                                                                                                                                                                                                                                                                                                               ä
                                                                    factor-alpha (TNF-alpha) analogue. The analogues have no residual TNF activity and are immunogenic in a large proportion of the human population (by using promiscuous epitopes). The TNF-alpha analogue is able to generate, in humans, neutralizing antibodies to wild type human TNF alpha, has at least one fragment of TNF substituted by a peptide containing an immunodominant T-cell epitope, and at least one TNR-alpha becall epitope. The substitution causes a significant change in the amino acid sequence of any one of the strands in the front beta-sheet, any of the connecting loops or any of the B', i or D strands in the back beta-sheet. The TNF-alpha analogues are used as vaccines for treatment or prevention of diseases associated with excessive release or activity of TNF-alpha, e.g. rheumatoid arthritis, Crohn's disease, ulcerative colitis, cancer of any sort, disseminated sclerosis, diabetes, psoriasis, osteoporosis and asthma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TNF-alpha; pharmaceutical; vaccine; self-protein; tumour necrosis factor; cetylpyridinium chloride; immunisation; antiinflammatory; antirheumatic; antiarthritic; antiulcer; cytostatic; antidiabetic; antipsoriatic; antidasthmatic; immunomodulator; neuroprotective; osteopathic; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention provides a pharmaceutical vaccine composition (I) for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                of
                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Novel vaccine composition for prevention/treatment of self-protein-mediated pathology such as cancer, diabetes and asthma, comprises modified immunogenic self-protein and surfactant capable o
                                                             The present sequence represents a modified human tumour necrosis
                                                                                                                                                                                                                                                                                                         3;
 immunodominant T cell epitope, useful in vaccines to treat or prevent TNF-associated diseases, e.g. cancer
                                                                                                                                                                                                                                                                                  Length 158;
                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                              Score 82.5; DB 19;
Pred. No. 0.00039;
1; Mismatches 7;
                                                                                                                                                                                                                                                                                                                             3 WSYGLRPGSSGPS---LQYIKANSKFIGITEL 31
                                                                                                                                                                                                                                                                                                                                           Bouman MHEM;
                                                                                                                                                                                                                                                                                                                                                                                                                  ABB07277 standard; Protein; 158 AA
                                   Claim 13; Page 73; 134pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 21; Page 39; 55pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Human TNF-alpha analogue TNF2-7.
                                                                                                                                                                                                                                                                              50.9%;
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                                                                                                                                                                                                                                                                                                    21; Conservative
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immunodominant T cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          acting as solubilizer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2002-114542/15.
N-PSDB; ABA94387.
                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
Matches 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (FERR ) FERRING BV.
                                                                                                                                                                                                                                                        158 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO200197837-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  26-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27-DEC-2001
                                                                                                                                                                                                                                                       Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                           ABB07277;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TNF2-7.
                                                                                                                                                                                                                                                                                                                                                                                           RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                       ABB0727
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1,
composition comprises at least one modified immunogenic self-protein (selected from modified TNF-alpha proteins) and a surfactant capable of acting as a solubilizer. (1) is useful for preventing or treating a self-protein-mediated pathology such as an inflammatory disease, theumatorid arthritis, an inflammatory bowel disease (ulcerative colitis or Crohn's disease), cancer, cachexia, multiple sclerosis, diabetes, psoriasis, osteoporosis or asthma. (1) is useful for inducing automatibodies to a self-protein such as TNF (tumour necrosis factor)-alpha in a human subject. (1) comprising cetylpyridinium chloride as a component is useful inflammatory disease. The present sequence represents a human analogue TNF2-7.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         treatment,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatm prophylaxis or amelioration of asthma or other chronic allergic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 158;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 82.5; DB 23
Pred. No. 0.00039;
1; Mismatches 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 3 WSYGLRPGSSGPS---LQYIKANSKFIGITEL 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Modified murine interleukin-5 SEQ ID NO: 14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    60 YSQVLFKGQGCPSTHVLQYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 2; Page 129-130; 172pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAB45502 standard; Protein; 116 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               50.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       19-APR-2000; 2000WO-DK00205.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99DK-0000552.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         26-FEB-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 65.6
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (MEBI-) M & E BIOTECH AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   it is possible that the helminthic infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               WPI; 2000-672791/65.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 158 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          116
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200065058-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             23-APR-1999;
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This is an immunogenized MUC-1 analogue containing foreign epitopes P2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   asthma.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAW8133
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                                                                 The invention relates to a novel immunogenic composition comprising a peptide that binds to an Major Histocompatibility Complex (MHC) class I andlecule to form a complex recognised by a cytotoxic T cell, and a second peptide that binds to an MHC class II molecule to form a complex comprises a recognised by a helper T cell (a group in the first peptide comprises a hepatitis B virus group). The composition of the invention has virucide and hepatotropic activity. The cytotoxic T lymphocyte (CTL)-stimulating peptides induce HLA-restricted responses to hepatitis B virus (HBV) configens. The peptides, derived from CTL group regions of both HBV surface and nucleocapsid antigens, are particularly useful in the treatment and prevention of HBV infection, including the treatment of chronically infected HBV carriers. The peptides are also useful in changes with a sequences shown in the pronon to developing chronic infection. The sequences shown in ABP51485-ABP5559 are peptides used for the production of the immunogenic composition of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mucin repeat; MUC-1 analogue; vaccination; self-protein; cancer; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Leach D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            51.9%; Score 84; DB 23; Length 24; 77.3%; Pred. No. 2.6e-05; tive 1; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mouritsen S, Nielsen KG, Haaning J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MUC-1 analogue containing foreign epitopes.
Claim 22; Column 39-40; 49pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY92665 standard; Peptide; 216 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9 PGSSGPSLQYIKANSKFIGITE 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 4; Page -; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Karlsson G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    61..75
/label= P2
136..156
/label= P30
/note= "q"
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98US-0105011.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2000-349917/30.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gautam A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY92665;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
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    \overset{\mathsf{M}}{\times}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\overset{\mathsf{M}}{\circ}\ove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This is an immunogenic analogue containing location proper to and P30. Immunogenic analogues of WUC-1 and, e.g. human prostate antipody binding regions and cysteine residues involved in disulfide authoody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms (see features table). It respons suitable for the insertion of foreign T helper epitopes were identified. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. hPSM, heregulin 2 (Her2) and/or fibroblast growth factor B0 (FGFRB). The method comprises of fecting simultaneous presentation by antigen producing cells (APCs) of the animals immune system of: (1) at least 1 CTL (cytotoxic the animals immune system of: (2) at least 1 first T helper cell group derived from the PA and/or at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human expectited or foreign T helper epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is the much nepages 220, 213 and 214 respectively, of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ï
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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vaccine; rheumatoid arthritis; Crohn's disease; ulcerative colitis;
cancer; disseminated sclerosis; diabetes; psoriasis; osteoporosis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       51.2%; Score 83; DB 21; Length 216;
57.6%; Pred. No. 0.00047;
iive 2; Mismatches 2; Indels 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Modified human tumour necrosis factor-alpha - comprises
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      9 PGSSGP-----SLQYIKANSKFIGITEL 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mouritsen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAW81331 standard; Protein; 158 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Jensen MR,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INF2-7, a TNF-alpha analogue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       98WO-DK00157.
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97DK-0000418.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21-APR-1999 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dalum I, Elsner H,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 1998-594561/50.
N-PSDB; AAV68420.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         216 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO9846642-A1
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15-APR-1997;
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antibodies against gonadotroph releasing hormone (GRRH also known so luteinising hormone releasing hormone. LIRRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunomimic subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic high and specific anti-GRRH activoses. The immunogen is effective in eliciting is a synthetic immunogen of the invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Increasing the muscle mass of animals used in meat production by down
 invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin;
T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia;
cardiant; human; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Cys-73 may be substituted by Ser to avoid disulfide bond formation"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "identical to residues 364-375 of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                        Growth differentiation factor 8 AutoVac construct GDF-8 P2-3.
                                                                                                                                                                                                          Length 50;
                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note= "optionally replaced by Glu-Gly"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note= "tetanus toxoid P2 epitope"
                                                                                                                                                                                                       Score 87; DB 23; I
Pred. No. 2.2e-05;
                                                                                                                                                                                                                                    Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                        AAB20147 standard; Protein; 109 AA.
                                                                                                                                                                                             53.7%; Scc.
100.0%; Pre
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Chimeric - Homo sapiens.
Chimeric - Clostridium tetani.
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                                                                                                                                                                                                                                                            2 HWSYGLRPGSSGPSL 16
                                                                                                                                                                                                                                                                          HWSYGLRPGSSGPSL 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-JUL-2000; 2000WO-DK00413
                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Halkier T, Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98..109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      83..97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                90..91
                                                                                                                                                                                                       Query Match
Best Local Similarity
Matches 15; Conserva
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI; 2001-112680/12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         73
                                                                                                                                                                            50 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Misc-difference
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                                                                                                                                                                                                                                                                                                                                                                                                              30-APR-2001
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26-JUL-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic
                                                                                                                                                                               Seguence
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Hepatitis B virus; HBV; antigen; major histocompatibility complex; MHC; cytotoxic T cell; helper T cell; virucide; hepatotropic; immunogenic; cytotoxic T lymphocyte; CTL; HLA-restricted response.
                                                                                                           The present sequence is that of Autovac construct GDF-8 P2-3, comprising the 109 C-terminal amino acid residues of human growth differentiation factor 8 (GDF-8) in which residues 83-97 are replaced by the promiscuous tetanus toxin T-cell epitope P2 (see AAB20143). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth contract of farm animals. The vaccines (see AAB20145-53) are capable of breaking autotolerance against autologous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the minimal disturbance of the authentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 activity can increase muscle mass by up to at least 45% in cattle, pigs and poultry used for meat production, reducing the need for antibution of the nucleus and production of the nucleus and production and the nucleus of the nucleus and production and the nucleus of the nucleus and production and 
                                                                                                                                                                  83-97 are
regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       treat human diseases such as cancer cachexia where muscle atrophy i
pronounced and for patients suffering from acute and chronic heart
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Immunogenic compositions for protecting against hepatitis B virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 22; Length 109;
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0.00011;
1;
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Pred. No. 0.000
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10 GSSGP-----SLQYIKANSKFIGITEL 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                68 GSAGPCCTPTKMSPIQYIKANSKFIGITEL 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HBV antigen associated peptide #8.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AA.
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91US-0749568.
92US-0827682.
92US-0874491.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ABP51515 standard; Peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            95US-0464496.
                                                                        Example 1; Page 99; 110pp;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chesnut RW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (EPIM-) EPIMMUNE INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2002-497942/53.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
Matches 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         109 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                US6322789-B1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            05-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           26-AUG-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26-AUG-1991;
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27-APR-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27 - NOV - 2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        infection
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              failure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 10
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Length 37;

Score 87;

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is a synthetic immunogen of the invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WPI; 2002-049440/06
                                            Query Match
Best Local Similarity
Matches 15; Conserv
                      37 AA;
                                                                                                                                                                                                                                                                                                                                                                             Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200185763-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Modified-site
                                                                                                                                                                                                            12-MAR-2002
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                         Sednence
                                                                                                                                                                                        AAU11429;
                                                                                                                                                                                                                                                                                                                                                                                                             Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                            Peptide
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  S X C
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antibodies against gonadotropin releasing hormone (GRRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GRRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GRRH antibody titres. The present sequence
                                                                                                                                                                                                                   Gonadotrophin releasing hormone, GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                                                                                                                                                 "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide
                                                                                                                                                                                                                                                                                                                                                                                     "Gonadotrophin releasing hormone epitope"
                                 ;
9
                                                                                                                                                                                                                                                                                                                                                                                                                     17..37
/note= "Tetanus toxoid sequence (947-967 aa)"
            Length 51;
Score 89; DB 23; Length or. Pred. No. 1.2e-05;
                                2; Mismatches
                                                     --- QYIKANSKF 25
                                                                  "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Stevens VC;
                                                                                                                                AAÚ11425 standard; peptide; 37 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 11; Page 9; 43pp; English.
                                                                                                                                                                                                 Synthetic immunogen peptide 6.
                                                                                                                                                                                                                                                                                     Chimeric - Clostridium tetani.
Chimeric - Mammalia.
                                                                                                                                                                                                                                                                                                                                                      /label= OTHER
          54.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-MAY-2001; 2001WO-US14363.
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                                                                                                                                                                          (first entry)
                                                     2 HWSYGLRPGSSGPSL-
                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            epitope or its analogue
                                                                                                                                                                                                                                                                                                                                                                  /note=
                                                                                                                                                                                                                                                                                                                                                                                                 11..16
/note=
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/note=
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                    Best Local Similarity
Matches 19; Conserv
                                                                                                                                                                                                                                                                                                                                 Key
Misc-difference
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                                                                                                                                                                          12-MAR-2002
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                                                                                                                                                                                                                                                                                                Chimeric -
Synthetic.
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           Query Match
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                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Other" Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         42..50\, /note= "Gonadotrophin releasing hormone epitope
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                                                                                                                                                                                                                                                                                                                                                                                                                                             Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
                                                                Indels
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                DB 23; L
1.6e-05;
ches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 77..37
/note= "Tetanus toxoid (947-967
38..41
                                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "Spacer peptide"
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                                                                                                                                                                                                                                                                  AA.
53.7%; Scc.
100.0%; Pre
0; '
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                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic immunogen peptide 10.
                                                                                                                                                                                                                                                              AAU11429 standard; peptide; 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Chimeric - Clostridium tetani.
Chimeric - Mammalia.
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /label= OTHER
                                                                                                          16
                                                                                                                                   HWSYGLRPGSSGPSL 16
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11..16
                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (2-10 aa)"
                                                                                                            HWSYGLRPGSSGPSL
                                                                Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            epitope or its analogue
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Gonadotrophin releasing hormone; GnRH; synthetic immunogen; luteinising hormone releasing hormone; LHRH; contraceptive; promiscuous helper T-cell peptide epitope; immunomimic peptide epitope; breast cancer; uterine cancer; gynaecological cancer; endometriosis; uterine fibroid; benign prostatic hypertrophy; prostate cancer.

"Other= Pyro-glutamic acid or 5-oxo proline"

Location/Qualifiers

'label = OTHER

Misc-difference

/note=

Peptide

Chimeric - Plasmodium falciparum. Chimeric - Mammalia.

Synthetic.

'note= "Gonadotrophin releasing hormone epitope

'note= "Gonadotrophin releasing hormone epitope

2-10 aa)"

Modified-site

/note= "Amidated glycine or glycinamide"

Stevens VC;

Grimes S, Michaeli D, (APHT-) APHTON CORP.

WPI; 2002-049440/06.

04-MAY-2001; 2001WO-US14363. 05-MAY-2000; 2000US-202328P

WO200185763-A2

15-NOV-2001

'note= "Malaria CSP protein (378-398 aa)"

"Spacer peptide"

(1..10 aa)" 11..16 /note= "Space

Peptide Peptide Peptide Peptide

17..36

"Spacer peptide"

37..42 /note=

AAU11431 standard; peptide; 51 AA.

Synthetic immunogen peptide 12.

(first entry)

L2-MAR-2002

AAU11431;

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AAU11431
                 The invention relates to a synthetic immunogen for inducing specific antibodies against gonadotropin releasing hormone (GnRH also known as luteinising hormone releasing hormone. LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other synaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic immunogen of the invention.
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
             breast cancer; uterine cancer; gynaecological cancer; endometriosis; uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                      "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue.
                                                                                                                                                                                                                                                                                                         "Gonadotrophin releasing hormone epitope
                                                                                                                                                                                 "Gonadotrophin releasing hormone epitope
                                                                                                                                                                                                                                                    "Malaria CSP protein (288-302 aa)'
                                                                                                                                                                                                                                                                                                                                                   /note= "Amidated glycine or glycinamide"
                                                                                                                                                                                                                           "Spacer peptide"
                                                                                                                                                                                                                                                                                "Spacer peptide"
                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim 11; Page 11; 43pp; English.
                                                     Chimeric - Plasmodium falciparum.
Chimeric - Mammalia.
                                                                                                                                        /label= OTHER
                                                                                                                                                                                                aa)"
                                                                                                                                                                                                                                                                                                                                                                                                                                      04-MAY-2001; 2001WO-US14363
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                                                                                                                                                                   1..10
/note=
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                                                                                                                                                                                                                                                                                             39..47
/note=
                                                                                                                                                        /note=
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                                                                                                                        Misc-difference
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                                                                                 Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Grimes S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                             Peptide
                                                                                                                                                                    Peptide
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                                                                                                                                                                                                                                                                                             Peptide
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antibodies against gonadorropin releasing hormone (GNRH also known set luteintsing hormone releasing hormone. LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GNRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GNRH antibody titres. The present sequence is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a synthetic immunogen for inducing specific
Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue -
                                                                                                                                                                                                                                                                       Claim 11; Page 12-13; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A);
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Gaps

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Length 47;

Score 89; DB 23; Length 47 Pred. No. 1.1e-05; 2; Mismatches 1; Indels

54.9%;

Conservative

Local Similarity nes 15; Conserv

Best Loc Matches

Query Match

HWSYGLRPGSSGPSLQYI 19 HWSYGLRPGSSGPSLKLL 19

RESULT

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us-09-848-834a-15.rag

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    Plasmodium falciparum.
    Mammalia.

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                                                                 Misc-difference
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                                  Synthetic.
                                                                                                                                                                                                                                                                                                 Grimes S,
           Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU11428;
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                                                                                                   Peptide
                                                                                                                           Peptide
                                                                                                                                               Peptide
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                                                                                                                                                                                                                                                                                                                                                                                     The invention relates to a synthetic immunogen for inducing specific antibodies against gonadotropin releasing hormone (GRHH also known as luteinising hormone releasing hormone (GRHH also known peptide which comprises a promisecous heiper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunomimic peptide epitope or its analogue. The synthetic immunomimic peptide as such is useful as a contraceptive and in the animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GRHH antibody titres. The present sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone: LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                      "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                           Novel synthetic immunogen for inducing immune response against gonadotrophi releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue
                                                                             "Gonadotrophin releasing hormone epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ;
0
                                                                                                                         /note= "Measles virus fusion protein F epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           54.9%; Score 89; DB 23; Length 34; 83.3%; Pred. No. 7.2e-06; ive 2; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   is a synthetic immunogen of the invention.
                                                                                                    "Spacer peptide"
                      Location/Qualifiers
                                                                                                                                                                                                                                                               Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAU11427 standard; peptide; 36 AA.
                                                                                                                                                                                                                                                                                                                                                                     Claim 11; Page 9; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        HWSYGLRPGSSGPSLKLL 19
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                                            /label= OTHER
                                                                                                                                                                                            04-MAY-2001; 2001WO-US14363.
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                                                                 1..10
/note=
                                                                                        11..16
/note=
17..34
                                                                                                                                                                                                                                                              Grimes S, Michaeli D,
                                                          /note=
                                                                                                                                                                                                                                                                                     WPI; 2002-049440/06.
                                                                                                                                                                                                                                        (APHT-) APHTON CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Best Local Similarity
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                                 Misc-difference
                                                                                                                                                WO200185763-A2
                                                                                                                                                                      15-NOV-2001
 Synthetic.
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                                                                    Peptide
                                                                                         Peptide
                                                                                                               Peptide
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AAU11427
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antibodies against gonadotropin releasing hormone (GRRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic immunogen of the invention.
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                                                                                               /note= "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide
                                                                                                                                                           'note= "Gonadotrophin releasing hormone epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           . 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel synthetic immunogen for inducing immune response against
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 36;
                                                                                                                                                                                                                                                                                     /note= "Malaria CSP protein (378-398 aa)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 89; DB 23;
Pred. No. 7.7e-06;
2; Mismatches 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HWSYGLRPGSSGPSL-----QYIKANSKF 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ā
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 11; Page 10; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAU11428 standard; peptide; 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Synthetic immunogen peptide 9.
                                                                     /label= OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      54.9%;
63.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     04-MAY-2001; 2001WO-US14363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-MAY-2000; 2000US-202328P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity 63.3
nes 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         epitope or its analogue
                                                                                                                                                                                         11..16
/note=
17..36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Michaeli D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (APHT-) APHTON CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2002-049440/06
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Chimeric - Measles virus.
Chimeric - Mammalia.
                                                                                                          WO200185763-A2
                                                                           Modified-site
                                                                                                                                15-NOV-2001.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Seguence
    Peptide
                       Peptide
                                            Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAU11424
    δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             , ö
                                                                                                                                                                                                                                                                                                 gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence
                                                                                                                                                                                                                                             peptide which comprises a promiscuous helper T-cell peptide epitope and immunoming peptide epitope or its analogue. The synthetic immunomen is useful inducing an immune response against GRRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        luterinising hormone releasing hormone; LHRH; contraceptive; promiscuous helper T-cell peptide epitope; immunominic peptide epitope; breast cancer; uterine cancer; gynaecological cancer; endometriosis; uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                        antibodies against gonadotropin releasing hormone (GnRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                     Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "Gonadotrophin releasing hormone epitope (1..10 aa)"
                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
                                                                                                                                                                                                                                                                                                                                                                              Length 31;
                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                            Score 161; DB 23;
Pred. No. 1.6e-16;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                2 HWSYGLRPGSSGPSLQYIKANSKFIGITEL 31
                                                                                                                                                                                                                                                                                                                                   is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                              Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                  99.4%; Scc.
100.0%; Pre
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ā
                                                                                                                                                                                          Claim 11; Page 10; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Synthetic immunogen peptide 11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAU11430 standard; peptide; 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chimeric - Clostridium tetani
Chimeric - Mammalia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /label= OTHER
                               04-MAY-2001; 2001WO-US14363.
                                                   05-MAY-2000; 2000US-202328P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (first entry)
                                                                                                                                                                                                                                                                                                                                                                                     1 Similarity 100.
30; Conservative
                                                                                                                                                                       epitope or its analogue
                                                                                             Michaeli D,
                                                                        (APHT-) APHTON CORP
                                                                                                                 WPI; 2002-049440/06
                                                                                                                                                                                                                                                                                                                                                       31 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Misc-difference
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           15-NOV-2001
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                                                                                             Grimes S,
                                                                                                                                                                                                                                                                                                                                                        Sequence
                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
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antibodies against gonadotropin releasing hormone (GRRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GrBH antibody titres. The present sequence is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue
                                                                                                           "Gonadotrophin releasing hormone epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                        /note= "Amidated glycine or glycinamide
"Tetanus toxoid (830-844 aa)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ö
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Pred. No. 2.5e-16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 HWSYGLRPGSSGPSLQYIKANSKFIGITEL 31
                                                       "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 11; Page 12; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAU11424 standard; peptide; 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic immunogen peptide 5.
                                                                                                                                                                                                                                                                                                                                                                                 04-MAY-2001; 2001WO-US14363.
                                                                                                                                                                                                                                                                                                                                                                                                                                           05-MAY-2000; 2000US-202328P
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Query Match
Best Local Similarity 100...
Best Local Similarity
Conservative
                                                                                                                              (2-10 aa)"
46
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                                                       /note=
38..46
   /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Grimes S, Michaeli D,
                                                                                                                 /note=
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (APHT-) APHTON CORP
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6
9
                                                                                                                                                    September 24, 2003, 16:58:36; Search time 35.036 Seconds (without alignments) 140.442 Million cell updates/sec
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /SIDS1/gcgdata/geneseg/genesegp-embl/AA1980.DAT:*/SIDS1/gcgdata/geneseg/genesegp-embl/AA1981.DAT:*/SIDS1/gcgdata/geneseg/genesegp-embl/AA1982.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                              1107863
                       GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                 US-09-848-834A-15
162
1 XHWSYGLRPGSSGPSLQYIKANSKFIGITEL 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                               1107863 seqs, 158726573 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                               OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                             BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A_Geneseq_19Jun03:*
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Maximum DB seq length: 200000000
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Perfect score:
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11 / SIDSI/gggdata/geneseqy embl/AA1998. DAT:
12 / SIDSI/ggdata/geneseqy embl/AA1998. DAT:
13 / SIDSI/ggdata/geneseqy embl/AA1985. DAT:
14 / SIDSI/ggdata/geneseqy-embl/AA1985. DAT:
15 / SIDSI/ggdata/geneseqy-embl/AA1986. DAT:
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14 / SIDSI/ggdata/geneseqy-embl/AA1991. DAT:
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18 / SIDSI/ggdata/geneseqy-emeseqy-embl/AA2001. DAT:
18 / SIDSI/ggdata/geneseqy-embl/AA2001. DAT:
18 / SIDSI/g

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Description	Synthetic immunoge	Growth differentia							
ID	AAU11426	AAU11430	AAU11424	AAU11427	AAU11428	AAU11431	AAU11425	AAU11429	AAB20147
BO BO	23	23	23	23	23	23	23	23	22
% Query Match Length DB	31	46	34	36	47	51	37	20	109
% Query Match	99.4	99.4	54.9	54.9	54.9	54.9	53.7	53.7	52.5
Score	161	161	88	89	8	88	87	87	82
Result No.	-	7	e	4	5	9	7	80	0

HBV antigen associ MUC-1 analogue con TNF2-7, a TNF-alph Human TNF-alph an Modified murine in TNF2-1, a TNF-alph an Modified human int Modified human int Tetanus toxoid epi Amyloid beta tetan An osteoprotegerin DNA encoding osteo Tetanus toxoid pre HLA class II bindi Universal immunost	_	GRH; synthetic immunogen; GRH; synthetic immunogen; GRH; contraceptive; epitope; immunomimic peptide epitope; naecological cancer; endometriosis; hypertrophy; prostate cancer. rs ro-glutamic acid or 5-oxo proline" phin releasing hormone epitope" ptide" oxoid sequence (830-844 aa)"
ABP51515 AAY92665 AAW81331 ABB07277 AAB45502 AAB4552 AAB4518 AAB4518 AAB4518 AAB45118 AAB45118 AAR65383 AAR65383 AAR65383 AAR65383 AAR65383 AAR65383	AAB20153 AAB70345 AAB70345 AAB70345 AAY92647 AAY92644 AAY92644 AAY92644 AAY926310 AAY926310 AAW15506 AAW13506 AAW17321 AAW77321 AAW77321 AAW77578	AA. GORH; ormone; de epitu gynae; gynae; fic hype iers rophin peptide toxoid
23 23 23 23 23 23 23 23 23 23 23 23 23 2	000000000000000000000000000000000000000	ide; 31. ry) tide 7. hormone easing h. il pepti prostat prostat ctani. n/Qualif OTHER "Gonadot "Spacer; "Tetanus
24 216 216 158 1158 116 118 118 118 119 119 119 119 119 119 119	160 1315 253 255 693 750 750 750 15 15 15 15 15 15	pept t ent. in pep iasing e religion in pep e religion dium a. dium a. octe= octe= octe= octe= octe=
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88 83 83 83 83 83 83 83 83 83 83 83 83 8	00000000000000000000000000000000000000	1426; AR-200 hetic dotrop inisin iscuous in file file file file file file file file
011111111111111111111111111111111111111		RESULT 1 AAU11426 XX AC AAU1 XX XX DE Synt; XX KW Gona KW Drom KW Drom KW Drom KW Drom KW Drom KW Synt; XX XX XX Chim OS Chim OS Synt; XX

Search completed: September 24, 2003, 17:41:20 Job time : 6.85346 secs

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Pfam; PF00446; GnRH; 1
                                                                                                                                                                                     CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GON1_MORSA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           the European Bioinformatics Institute. There are no restrictions on use by non-profit institutions as long as its content is in no
                                                                                                                                                                                                                                                                                                                              GONI_HAPBU STANDARD; PRT; 94 AA.
P51918; 093387;
01-0CT-1996 (Rel. 34, Created)
10-MAY-2000 (Rel. 39, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Gonadoliberin I precursor (Gonadotropin-releasing hormone I) (GnRH-I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      "Primary structure of solitary form of gonadotropin-releasing hormone (GnRH) in cichlid pituitary; three forms of GnRH in brain of cichlid and pumpkinseed fish.";
                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Haplochromis burtoni (Burton's mouthbrooder).
Eukaryota; Metazoa: Chordata; Craniata; Vertebrata; Buteleostomi;
Actinopterygii; Neopterygii; Teleostei; Buteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Labroidei;
Cichlidae; Astatotilapia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        White S.A., Kasten T.L., Bond C.T., Adelman J.P., Fernald R.D.; "Three gonadotropin-releasing hormone genes in one organism suggest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -!- SUBCELLULAR LOCATION: Secreted.
-!- TISSUE SPECIFICITY: SYNTHESIZED IN PREOPTIC NEURONS AND IS
TRANSPORTED TO THE PITUITARY IN THE PREOPTIC-HYPOPHYSEAL AXONS.
-!- MASS SPECTROMETRY: MW=1113.9; METHOD=MALDI; RANGE=23-32.
-!- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gonadotropin-releasing hormone (GnRH) gene expression
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1. Pept. 57:43-53(1995).
FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS. MAY BE
RESPONSIBLE FOR THE REGULATION OF THE HYPOTHALAMIC-PITUITARY
                                                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Powell J.F.F., Fischer W.H., Park M., Craig A.G., Rivier J.E., White S.A., Francis R.C., Fernald R.D., Licht P., Warby C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       reveals a distinct origin for GnRH-containing neurons in the
   DB 1; Length 92;
                                                                 Indels
                                                              ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                novel roles for an ancient peptide.";
Proc. Natl. Acad. Sci. U.S.A. 92:8363-8367(1995).
                               Pred. No. 0.42;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 use by non-profit institutions as long a modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Comp. Endocrinol. 112:322-329(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        or send an email to license@isb-sib.ch).
Score 54;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; AF076961; AAC27716.1; ...
PIR; 150739; 150739.
InterPro; 1PR002012; GnRH.
InterPro; 1PR004079; GonadoliberinI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
MEDLINE-95396797; Pubmed-7667296;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. MEDLINE-99061842; PubMed-9843638;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE-Pituitary;
MEDLINE-95372591; PubMed-7644702;
33.3%;
88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; U31865; AAC59691.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            White R.B., Fernald R.D.;
                                                           8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (LH-RH I) (Luliberin I).
                                                                                                                      2 HWSYGLRPG 10
                                                                                                                                                                                 HWSYGLQPG 33
                               Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 23-32.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GONADAL AXIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=8153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sherwood N.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Ontogeny of
   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         between
                                                                                                                                                                                                                                                                         RESULT 14
GON1_HAPBU
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                                                           Matches
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DDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDDT-TDDD-TDDD-TDDD-TDDD-TDDD-TDD-TDD-TDDD-TDD-TDD-TDD-TDD-TDD-TDD-TD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           , Zohar Y.;
separate
                                                                                                                                                                                                                                                                                                                                                                                                           28-FEB-2003 (Rel. 40, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Gonadoliberin I precursor (Gonadotropin-releasing hormone I) (GnRH-I)
GNRH-I) (Luliberin I).
                                 Hormone; Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus;
                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Morone saxatilis (Striped bass).
Bukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Actinopterygii, Neopterygii, Teleostei, Euteleostei, Neoteleostei,
Acanthomorpha, Acanthopterygii, Percomorpha, Perciformes, Percoidei,
                                                                                                                                         AMIDATION (G-33 PROVIDE AMIDE GROUP).

ENGHRTFKK -> KMDTGHSRNERFL (IN REF. 1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GONADOLIBERIN I.
GNRH-ASSOCIATED PEPTIDE I (POTENTIAL).
                                                                                                             GNRH-ASSOCIATED PEPTIDE I (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A. MEDLINE=99061809; MEDLINE=99061809; Pubmed=9845669; Chow M.M., Kight K.E., Gothilf Y., Alok D., Stubblefield J., Zohar "Multiple GnRHs present in a teleost species are encoded by separa genes: analysis of the sbGnRH and cGnRH-II genes from the striped
                                                                                                                                                                                                                                            ..
O
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -! - FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS (BY
                                                                                                                                                                                                           Length 94;
                                                                                                                               PYRROLIDONE CARBOXYLIC ACID
                                                                                                                                                                                                                                           1; Indels
                                              Pyrrolidone carboxylic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Signal, Multigene family, Pyrrolidone carboxylic acid SIGNAL 1 \ 22 \ {
m POTENTIAL}.
                                                                                                                                                                            E57DBA8333278D7 CRC64;
                                                                               PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROGONADOLIBERIN I.
                                                                                                                                                                                                           DB 1;
                                                                                                                                                                                                                          0.86;
                                                                                                                                                                                                                                                                                                                                                                                    95 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -!- SUBCELLULAR LOCATION: Secreted.
                                                                                                GONADOLIBERIN
                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                           Score 52;
Pred. No. (
PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       bass, Morone saxatilis.";
J. Mol. Endocrinol. 21:277-289(1998)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Interpro; IPR002012; GnRH.
Interpro; IPR004079; GonadoliberinI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; AF056314; AAD03817.1; -.
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PRINTS; PR01541; GONADOLIBRNI.
                                                              22
94
32
94
23
32
94
10382 MW;
                                                                                                                                                                                                           32.1%;
88.9%;
                                            Signal; Multigene family; SIGNAL 1 22
                                                                                                                                                                                                                                           8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS00473; GNRH; 1
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32
32
23
23
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                                                                                                                                                                                                                                                                                                      HWSYGLSPG 32
                                                                                                                                                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=34816;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIMILARITY).
                                                                               23
32
32
38
86
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16-0CT-2001
                                                                                                                                                                                                                                                                                                                                                                                    GON1_MORSA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Moronidae;
                                                                                                                                           MOD_RES
CONFLICT
SEQUENCE
                                                                                                                                                                                                                                                                                                        24
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MOD_RES
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                                                                                                     "DNA sequence, structure and gene expression of mycobacteriophage L5: a phage system for mycobacterial genetics.";
Mol. Microbiol. 7:395-405(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        P37041; P20407;
01-FEB-1991 (Rel. 17, Created)
01-FEB-1991 (Rel. 17, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Gonadoliberin I (Gonadotropin-releasing hormone I) (GnRH-I) (LH-RH I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alligator mississippiensis (American alligator).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Crocodylidae; Alligatorinae; Alligator.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 55.5; DB 1; Length 66; Pred. No. 0.17;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 54; DB 1; Length 10;
Pred. No. 0.035;
; Mismatches , 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  66 AA; 7424 MW; 9C7104C7A4FA74A5 CRC64;
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284B23D7286B45A3 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRT;
                         SEQUENCE FROM N.A.
MEDLINE=93211282; PubMed=8459766;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=91352338; PubMed=1882082;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           34.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; Z18946; CAA79460.1; -.
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88.9%;
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                                                                               Hatfull G.F., Sarkis G.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity 43.8 Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STANDARD;
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nes 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=8496;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (Luliberin I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE-Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIR; S31029;
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SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
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GON1_ALLMI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Loc
Matches
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RESULT 13

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GONI_CHICK STANDARD; PRT; 92 AA.

1937042;
10.1-FEB-1991 (Rel. 17, Created)
10.1-FEB-1991 (Rel. 29, Last sequence update)
10.10N-1994 (Rel. 29, Last sequence update)
10.10N-1994 (Rel. 41, Last annotation update)
10.10N-1994 (Rel. 10, Last annotation update)
10.10N-1994 (Rel. 11, Last annotation update)
10.10N-1994 (Rel. 12) (Luliberin I) (Gonadoliberin I (LH-RH I) (Lutelnizing hormone-releasing hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I].
10.10N-1994 (Rel. 20, Rel. 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           King J.A., Millar R.P.;
"Structure of avian hypothalamic gonadotrophin-releasing hormone.";
S. Afr. J. Sci. 78:124-125(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GNRH-ASSOCIATED PEPTIDE I.
PYRROLIDONE CARBOXYLIC ACID.
AMIDATION (G-34 PROVIDE AMIDE GROUP).
61AEB7EBAF508B6A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIANE=82265777; PubMed=7050118;
King J.A., Millar R.P.;
Structure of chicken hypothalamic luteinizing hormone-releasing
hormone. I. Structural determination on partially purified
material.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            King J.A., Millar R.P., "Structure of chicken hypothalamic luteinizing hormone-releasing hormone. II. Isolation and characterization."; J. Biol. Chem. 257:10729-10732(1982).
                                                                                                                                                                                                                                                                                                                                                                       [1]
SEQUENCE FROM N.A.
STRAIN=White leghorn;
MEDLINE=94059355; PubMed=7902095;
Dunn I.C., Chen Y., Hook C., Sharp P.J., Sang H.M.;
"Characterization of the chicken preprogonadotrophin-releasing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   J. Biol. Chem. 257:10722-10728(1982).
-!- FUNCTION: Stimulates the secretion of gonadotropins.
-!- SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -!- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; X69491; CAA49246.1; -. PIR; I50644. InterPro; IPR002012; GonadoliberinI. InterPro; IPR004079; GonadoliberinI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Signal; Pyrrolidone carboxylic acid. SIGNAL 1 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       hormone-I gene.";
J. Mol. Endocrinol. 11:19-29(1993)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TISSUE=Hypothalamus;
MEDLINE=82265778; PubMed=7050119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE-Hypothalamus;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 24-33
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                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=9031;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOD_RES
SEQUENCE
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MOD_RES
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                                                                                                                                                                                                                                                            GONADOTROPINS; IT STIMULATES FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AMIDATION (G-34 PROVIDE AMIDE GROUP) (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I]. GNRHI OR GNRH.
                                        (Common tree shrew).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         no RNA stage; Caudovirales; Siphoviridae;
                                                                                                                                                                                            "Characterization of two new preproGnRH mRNAs in the tree shrew:
first direct evidence for mesencephalic GnRH gene expression in
placental mammal.";
                                                                                                                                                    MEDLINE-97079639; PubMed-8921350;
Kasten T.L., White S.A., Norton T.T., Bond C.T., Adelman J.P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PYRROLIDONE CARBOXYLIC ACID SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 58; DB 1; Length 92;
Pred. No. 0.11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4FDBF2C58CF5F63B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GONADOLIBERIN I.
GNRH-ASSOCIATED PEPTIDE
                                                 Tupaia glis belangeri (Common tree shrew).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata
Mammalia; Eutheria; Scandentia; Tupaiidae; Tupaia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cleavage on pair of basic residues; Hormone; An
Placenta; Signal; Pyrrolidone carboxylic acid.
SIGNAL 1 23 BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-FEB-1994 (Rel. 28, Created)
01-FEB-1994 (Rel. 28, Last sequence update)
01-FEB-1994 (Rel. 28, Last annotation update)
Gene 84 protein (GP84).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          35.8%; bcc.
100.0%; Pred. No. c.
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     66 AA
                                                                                                                                                                                                                                                                                                                    -!- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                          -1- FUNCTION: STIMULATES THE SECRETION OF THE SECRETION OF BOTH LUTEINIZING AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ACTIVITY
                                                                                                                                                                                                                                              Gen. Comp. Endocrinol. 104:7-19(1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Interpro; IPR002012; GNRH.
Interpro; IPR04079; GonadoliberinI.
Pfam; PF00446; GNRH; 1.
PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
                                                                                                                                                                                                                                                                                                         -!- SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; U63326; AAB16837.1; -.
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Viruses; dsDNA viruses,
L5-like viruses.
NCBI_TAXID=31757;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           24
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                                                                                                                                         TISSUE-Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   25 HWSYGLRPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity
                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         92 AA;
                                                                                                NCBI_TaxID=9396;
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24
37
26
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                                                                                                                                                                                   Fernald R.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VG84_BPML5
Q05301;
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PEPTIDE
ACT_SITE
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                                                                                                                                                                                                                                        SCIENCE 235:1514-1517(1987).
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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                                                                                                                                                                                                Adelman J.P., Bond C.T., Douglass J., Herbert E.;
Two mammalian genes transcribed from opposite strands of the same
DNA locus.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AMIDATION (G-34 PROVIDE AMIDE GROUP). 494B5C64DA8A3EB3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor (Contains: Gonadoliberin I (LH-RH I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;
0
                                                                             Maier C.C., Marchetti B., Leboeuf R.D., Blalock J.E.;
"Thymocytes a mRNA that is identical to hypothalamic
luteinizing hormone-releasing hormone mRNA.";
Cell. Mol. Neurobiol. 12:447-454(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             DB 1; Length 92;
0.11;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                 -1- SUBCELLULAR LOCATION: Secreted.
-1- TISSUE SPECIFICITY: CENTRAL NERVOUS SYSTEM.
-1- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Cleavage on pair of basic residues; Hormone; Placenta; Signal; Pyrrolidone carboxylic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            92 AA.
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InterPro; IPR004079; GonadoliberinI.
      Mol. Endocrinol. 3:1257-1262(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; M15528; -; NOT_ANNOTATED_CDS.
PIR; A40147; RHRTG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; M15527; AAA42141.1; ALT_SEQ.
EMBL; M15529; AAA42139.1; -.
                                                 TISSUE=Thymus;
MEDLINE=93105480; PubMed=1468115;
                                                                                                                                                                                  MEDLINE-87149087; PubMed-3547652;
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PROSITE; PS00473; GNRH; 1.
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                                                                                                                                                      SEQUENCE OF 1-47 FROM N.A.
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EMBL; M31670; AAA41264.1;
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Matches 9; Conserv
                                   FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              92 AA;
                                                                                                                                                                     TISSUE-Heart;
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Q95335;
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SEQUENCE
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ACT_SITE
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GON1_TUPGB
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Gaps

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or send an email to license@isb-sib.ch).
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01-APR-1988
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28-FEB-2003
                                                                                                                                                        MIM; 152760
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P07490;
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VARIANT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Genet. 23:373-373(1999).
FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES
THE SECRETION OF BOTH, LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Characterization of single-nucleotide polymorphisms in coding regions
                                                                                                                                                                                                                                                                                                                              Hayflick J.S., Adelman J.P., Seeburg P.H.; The complete nucleotide sequence of the human gonadotropin-releasing
                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-86094338; PubMed-2867548; AdeLinan J.P., Mason A.J., Hayfilck J.S., Seeburg P.H.; Alsolation of the gene and hypothalamic CDNA for the common precursor of gonadotropin-releasing hormone and prolactin release-inhibiting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-99318093; PubMed-10391209;
Cardill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N.,
Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Zlaugra L.,
Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.O.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Cargill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N., Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L., Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.Q.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seeburg P.H., Adelman J.P.; Characterization of cDNA for precursor of human luteinizing hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SUBCELLUIAR LOCATION: Secreted.
PHARMACEUTICAL: Available under the names Factrel (Ayerst Labs),
Lutrepulse or Lutrelef (Ferring Pharmaceuticals) and Relisorm
                                                                                                                                                                          Homo sapiens (Human).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
Mammalia, Eutheria, Primates, Catarrhini, Hominidae, Homo.
21-JUL-1986 (Rel. 01, Created)
1-JAR-1988 (Rel. 07, Last sequence update)
28-FBB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
Plogonadoliberin I precursor precipitation of the progonation of the program of the p
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "The chemical identity of the immunoreactive LHRH-like peptide blosynthesized in the human placenta."; Blochem. Blophys. Res. Commun. 109:1061-1071(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Proc. Natl. Acad. Sci. U.S.A. 83:179-183(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -1- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A., AND VARIANT SER-16.
MEDLINE-85012739; Pubmed-6090951;
                                                                                                                                                                                                                                                                                                                                                                                                Nucleic Acids Res. 17:6403-6403(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=83126573; PubMed=6760865;
Tan L., Rousseau P.;
                                                                                                                                                                                                                                                                                                            MEDLINE=89366682; PubMed=2671939;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nat. Genet. 22:231-238(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            releasing hormone.";
Nature 311:666-668(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 factor in human and rat.
                                                                                                                                                        GNRH1 OR GNRH OR LHRH.
                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 24-33.
                                                                                                                                                                                                                                            NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                              gene.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     of human genes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  VARIANT SER-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Lander E.S.;
                                                                                                                                                                                                                                                                                                                                                                              hormone
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Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I) (Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GnRH I) (Luliberin I); Prolactin release-inhibiting factor
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MEDLINE-86094338; PubMed=2867548;
Adelinan J.P., Mason A.J., Hayfilick J.S., Seeburg P.H.;
"Isolation of the gene and hypothalamic cDNA for the common precursor
of gonadotropin-releasing hormone and prolactin release-inhibiting
factor in human and rat.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PRO141; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus; Placenta; Pharmaceutical; Signal; Polymorphism; Pyrrolidone carboxylic acid.
SIGNAL
CHAIN
24 92 PROGONADOLIBERIN I.
PEPTIDE 24 33 GONADOLIBERIN I.
PEPTIDE 37 92 GNRH-ASSOCIATED PEPTIDE I.
ACT_SITE 26 26 APPERRS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                  MIN: 152760; -.
GO: GO:0005625; C:soluble fraction; TAS.
GO: GO:0005183; F:luteinizing hormone-releasing factor activity; TAS.
GO: GO:0007267; P:cell-cell signaling; TAS.
GO: GO:0007275; P:negative regulation of cell proliferation; TAS.
GO: GO:0007165; P:signal transduction; TAS.
InterPro: IPR002012; GGRH.
InterPro: IPR004079; GonadoliberinI.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AMIDATION (G-34 PROVIDE AMIDE GROUP). W -> S (IN dbSNP:6185).
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Bond C.T., Hayflick J.S., Seeburg P.H., Adelman J.P.;
"The rat gonadotropin-releasing hormone: SH locus: structure and
hypothalamic expression.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ;;
0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PYRROLIDONE CARBOXYLIC ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /FTId=VAR_013943.
30A72221B076FA79 CRC64;
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Proc. Natl. Acad. Sci. U.S.A. 83:179-183(1986).
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(Rel. 07, Last sequence update)
(Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               92 AA.
EMBL; X01059; CAA25526.1; -. EMBL; M12578; AAA35916.1; -. EMBL; X15215; CAA33285.1; -. PIR; S05308; RHHUG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10380 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                             HGNC:4419; GNRH1.
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SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    92 AA;
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33
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Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
                                                                                                                                                                                                                                                                                                    MEDLINE=72117544; PubMed=4946275;
Baba Y., Arimura A., Schally A.V.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; L32864; AAA31066.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               10090 MW;
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                                                                                                                                                                                                                                                                                          SYNTHESIS OF GONADOLIBERIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                9; Conservative
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                                                  TISSUE-Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 HWSYGLRPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity
                                     SEQUENCE FROM N.A.
                                                                                                   SEQUENCE OF 24-33.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               91 AA;
            NCBI_TaxID=9823;
                                                                                                                                                                                                                                                    phase method.";
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P01148;
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ACT_SITE
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SEQUENCE
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GON1_HUMAN
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                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                  MEDLINE-87069928; PubMed-3024317; Mason A.J., Hayflick J.S., Zoeller R.T., Young W.S. III, Mason A.J., Hayflick J.S., Zoeller R.T., Young W.S. III, Phillips H.S., Nikolics K., Seeburg P.H.; Teleasing hormone gene is responsible for hypogonadism in the hpg mouse."; Science 234:1316-1371(1986).

THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATES THE SECRETION OF GONADOTROPING, IT STIMULATES
            (Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing normone I) (GnRH I) (Luliberin I); Prolactin release-inhibiting factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRINTS; PRO1541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PYRROLIDONE CARBOXYLIC ACID.
AMIDATION (G-32 PROVIDE AMIDE GROUP).
                                                                     Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Musinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-OCT-1996 (Rel. 34, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I) [Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I].
GNRHI OR GNRH.
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sus scrofa (Pig).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 1;
0.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Placenta; Signal; Pyrrolidone carboxylic acid.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              91 AA.
                                                                                                                                                                                                                                                -!- SUBCELLULAR LOCATION: Secreted.
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8
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                                                                                                                                                                                                                                                                                                                                                                                                            MGD; MGI:95789; Gnrh.
InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
Pfam; PF00446; GnRH; 1.
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31
90
24
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                                                              Mus musculus (Mouse)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
9; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                   PIR; A47578; RHMSG
                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               90 AA;
                                                                                                  NCBI_TaxID=10090;
                                                 GNRH1 OR GNRH.
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P49921;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "On the tryptophan residue in porcine LH and FSH-releasing hormone.";
Biochem. Biophys. Res. Commun. 45:483-487(1971).
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES
THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                         SYNTHESIS OF GONADOLIBERIN.
MEDLINE=72065376; PubMed=4942726;
Matsuo H., Arimura A., Nair R.M.G., Schally A.V.;
"Synthesis of the porcine LH- and FSH-releasing hormone by the solld-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus; Placenta; Signal; Pyrrolidone carboxylic acid.
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APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AMIDATION (G-34 PROVIDE AMIDE GROUP).
8340474F32DDAA99 CRC64;
                                                                                                                                      MEDLINE=72114303; PubMed-4946067; Babba Y., Matsuo H., Schally A.V.; "Attucture of the porcine LH- and FSH-releasing hormone. II. Confirmation of the proposed structure by conventional sequential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
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PYRROLIDONE CARBOXYLIC ACID.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
Weesner G.D., Matteri R.L., Becker B.A.;
Submitted (MAY-1994) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                            analyses.";
Biochem. Biophys. Res. Commun. 44:459–463(1971).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Biochem. Biophys. Res. Commun. 45:822-827(1971).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    0.11;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -:- SUBCELLULAR LOCATION: Secreted.
-:- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     100.0%; Preq. ....
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InterPro; IPR004079; GonadoliberinI.
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01-JAN-1990
01-JAN-1990
28-FEB-2003
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GON1_MOUSE
P13562;
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SEQUENCE
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Best Local S
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                               GON1_XENLA
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                                                                                                                                                                                                                                                                                                 GONADOTROPINS; IT STIMULATES FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                AMIDATION (G-16 PROVIDE AMIDE GROUP) (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                            Ma Y.J., Costa M.E., Ojeda S.R.; "Developmental expression of the genes encoding transforming growth factor alpha and its receptor in the hypothalamus of female rhesus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                   01-0CT-1996 (Rel. 34, Created)
01-0CT-1996 (Rel. 34, Last sequence update)
01-0CT-1996 (Rel. 41, Last annotation update)
Prognadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotrophin-releasing hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I]
                                                                                                                                                    Macaca mulatta (Rhesus macaque).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PYRROLIDONE CARBOXYLIC ACID (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              35.8%; Score 58; DB 1; Length 67; 100.0%; Pred. No. 0.075; ative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTIVITY (BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          505394DAA261A3F2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROGONADOLIBERIN I. GONADOLIBERIN I.
                                                   67 AA.
                                                                                                                                                                                                                                                                                                                              -!- SUBCELLULAR LOCATION: Secreted.-!- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                     Neuroendocrinology 60:346-359(1994).
-!- FUNCTION: STIMULATES THE SECRETION OF THE SECRETION OF BOTH LUTEINIZING AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY
 HWSYGLRPGG -----KRNAK 16
                                                   PRT;
                                                                                                                                                                                                             SEQUENCE FROM N.A.
TISSUE-Hypothalamus;
MEDLINE-95124501; Pubmed-7545971;
                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; S75918; AAB33096.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7573 MW;
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InterPro; IPR002012; GnRH.
InterPro; IPR004079; Gonad
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100.
                                                  STANDARD;
                                                                                                                                                                                  Cercopithecinae; Macaca.
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>67
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                                                                                                                                          GNRHÎ OR GNRH OR LHRH.
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                                                                                                                                                                                            NCBI_TaxID=9544;
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                                                  GON1_MACMU
                                                                                                                                 (Fragment)
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SEQUENCE
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ACT_SITE
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                              RESULT 4
GON1_MACMU
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                                                                  01-NOV-1995 (Rel. 32, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Gonadoliberin I precursor (Gonadotropin-releasing hormone I) (GNRH-I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pram; PF00146; GORH; 1.
PRINTS: PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus; Signal; Pyrrolidone carboxylic acid.
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AMIDATION (G-34 PROVIDE AMIDE GROUP).
6F4F36FBAE0D4284 CRC64;
                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                                                     Hayes W.P., Wray S., Battey J.F.; "The frog gonadotropin-releasing hormone-I (GnRH-I) gene has a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                .;
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                                                                                                                                                                                                                                                                                                                                                                                                           mammalian-like expression pattern and conserved domains in
GnRH-associated peptide, but brain onset is delayed until
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1; Length 89;
0.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (Rel. 13, Created)
(Rel. 13, Last sequence update)
(Rel. 41, Last annotation update)
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    89 AA.
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Pred. No.
                                                                                                                                  (LH-RH) (Luliberin I).
Xenopus laevis (African clawed frog).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PIR; 151423; 151423.
InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
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100.0%; Pre/
0; }
                                                                                                                                                                                                                                                                                                                                             MEDLINE=94185563; PubMed=8137750;
                                               (Rel. 32, Created)
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    STANDARD;
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33
89
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                                                                                                                                                                                                                                Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                          TISSUE-Forebrain;
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                                                                                                                                                                                                                                                   NCBI_TaxID=8355;
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37
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24
33
                                                                                                                                                                                                                                                                                                                                                                                                                                                            metamorphosis.
GON1_XENLA
P45656;
01-NOV-1995 (
01-NOV-1995 (
28-FEB-2003 (
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61 AA.

PRT;

HWSYGLRPGG-----KRNAERLG 19

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us-09-848-834a-15.rsp

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GON1_SHEEP
                                       GON1_SHEEP
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                                                                                                                                                                                                                                                                                                  Jansen H.T., Stevens P.J., Zeitler P., Lehman M.N.;
Submitted (MAR-1997) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES
THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PERINTS: PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AMIDATION (G-11 PROVIDE AMIDE GROUP) (BY
                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SIMILARITY).
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                         15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
15-DEC-1998 (Rel. 41, Last annotation update)
Prognadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
[Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I]
                                                                                                                                                                                                                         Mesocricetus auratus (Golden hamster).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Cricetinae;
                              ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ACTIVITY (BY SIMILARITY).
PYRROLIDONE CARBOXYLIC ACID (BY
         Length 1314;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GONADOLIBERIN I.
GNRH-ASSOCIATED PEPTIDE I (BY
           . 0.0044;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 63;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FC94995676F77180 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 61; DB 1;
Pred. No. 0.025;
          DB 1;
                                                                                                                        63 AA.
                                                                                                                                                                                                                                                                                                                                                   -!- SUBCELLULAR LOCATION: Secreted.
                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SIMILARITY).
         Score 76;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Placenta, Pyrrolidone carboxylic acid.
                   Pred. No
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
                                                                                                                         PRT;
       46.98;
                                                             EMBL; U91938; AAB51302.1; -.
                                                 31
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7370 MW;
                                                 16 LOYIKANSKFIGITEL
                              Conservative
                                                                                                                         STANDARD;
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>63
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                                                                                                                                                                                                                  OR GNRH OR LHRH.
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         Query Match
Best Local Similarity
Matches 15; Conserv
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nes 12; Conserv
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SEQUENCE FROM N.A.
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                                                                    828
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                                                                                                              GON1_MESAU
                                                                                                  RESULT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Burgus R., Butcher M., Amoss M., Ling N., Monahan M., Rivier J., Fellows R., Blackwell R., Vale W., Guillemin R.;
Fellows R., Blackwell R., Vale W., Guillemin R.;
Fellows R., Elackwell R., Vale M., Gradation P., Spectrometry-decapeptide-Edman degradation.";
From Vall Acad. Sci. U.S.A. 69:278-282(1972).
FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES
THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                  15-DEC-1998 (Rel. 37, Last Sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
28-FCB-2003 (Rel. 41, Last annotation update)
39-FCB-2003 (Rel. 41, Leleasing hormone I) (Gonadotropin-releasing hormone I) (Gone II) (Luliberin I); GORH-associated peptide I]
                                                                                                                                                                                                                                                                                                                                                                    Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AMIDATION (G-11 PROVIDE AMIDE GROUP).
                                                                                                                                                                                                                                                                                              Ovis aries (Sheep).
Eukaryota, Metazoa, Chordata, Craniata, Vertebrata, Euteleostomi,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          .
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PYRROLIDONE CARBOXYLIC ACID.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rodriguez R.E., Wise M.E.;
Submitted (OCT-1993) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           63962A1AE319B8F0 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -!- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 12-61 FROM N.A.
STRAIN=Western range; TISSUE=Hypothalamus;
Rodriguez R.E., Wise M.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; U02517; AAA03433.1; -.
InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE OF 1-10.
MEDLINE=72094314; PubMed=4550508;
Q28588;
Q28588;
15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRINTS; PR01541; GONADOLIBRNI.
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Local Similarity 52.2%;
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Bovidae; Caprinae; Ovis.
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GNRH1 OR GNRH OR LHRH.
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2 HWSYGLRPGSSGPSLQYIKANSKFIG 27

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   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@ib-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                           synaptobrevin 2.

-!- Copraction 3.

-!- Copraction 3.

-!- SUBUNIT: THE PRECURSOR POLYPEPTIDE IS SUBSEQUENTLY CLEAVED TO YIELD SUBGRAINS L AND H. THESE REMAIN LINKED BY A DISULFIDE BRIDGE AND ARE NON-TOXIC AFTER SEPARATION.

-!- MISCELLANEOUS: THE C-TERMINAL OF THE HEAVY CHAIN BINDS TO GANGLIOSIDE RECEPTORS.

-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY M27.
                                                                                                                                                                                                                                                                                                                                                     NAT. STRUCT. BIO1. 4:788-792(1997).

-1- FUNCTION: TETANUS TOXIN ACTS BY INHIBITING NEUROTRANSMITTER
RELEASE. IT BINDS TO PERIPHERAL NEURONAL SYNAPSES, IS INTERNALIZED
WHENE IT CAN WOVES BY RETROGRADE TRANSPORT UP THE AXON INTO THE SPINAL CORD
WHERE IT CAN WOVE BETWEEN POSTSYNAPTIC AND PRESYNAPTIC NEURONS. IT
INHIBITS NEUROTRANSMITTER RELEASE BY ACTING AS A ZINC
ENDOPERILDASE THAT CAPALYZES THE HYDROLYSIS OF THE 76-GLN-|-PHE-77
                                                                                                                                                                                           identification of SUBSTRATE.
MEDIATE-9303129; Pubmed=1331807;
Schlavo G., Benfenati F., Poulain B., Rossetto O., de Laureto P.P.,
Dasgupta B.R., Montecucco C.;
"Tetanus and botulinum-B neurotoxins block neurotransmitter release
by proteolytic cleavage of synaptobrevin.";
                                                                                                                                                                                                                                                                                                 MEDLINE-97475217; PubMed-9334741;
Umland T.C., Wingert L.M., Swaminathan S., Furey W.F., Schmidt J.J.
                                                                                                                                               "Tetanus toxin is a zinc protein and its inhibition of neurotransmitter release and protease activity depend on zinc."; EMBO J. 11:3577-3583(1992).
                                MEDLINE-92037649; PubMed-1935979; Krieglstein K.G., Henschen A.H., Weller U., Habermann E.; "Limited proteolysis of tetanus toxin. Relation to activity and identification of cleavage sites."; Eur. J. Biochem. 202:41-51(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                   BOND OF SYNAPTOBREVIN-2.
CATALYTIC ACTIVITY: Hydrolysis of 76-Gln-|-Phe-77 bond in
                                                                                                                                                                                                                                                                                                                        Sax M : "Structure of the receptor binding fragment HC of tetanus
                                                                                        [7]
IDENTIFICATION AS ZINC-PROTEASE.
MEDLING-93010948; PubMed-1396558;
Schiavo G., Poulain B., Rossetto O., Benfenati F., Tauc Montecucco C.;
                                                                                                                                                                                                                                                                                    X-RAY CRYSTALLOGRAPHY (2.7 ANGSTROMS) OF 874-1314.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR000395; Bontoxilysin.
InterPro; IPR006025; Zn_MTpeptdse.
Pfam; PF01742; Peptidase_M27; 1.
 Biochem. 188:39-45(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; X04436; CAA28033.1; EMBL; X06214; CAA29564.1; EMBL; AF528097; AA037454.1; EMBL; M12739; AAA23282.1; PIR; A25689; BTCLTN. PDB; 1A8P; 29-ARR-98. PDB; 1A8D; 14-OCT-98.
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PDB; 1DIW; 24-MAR-00.
PDB; 1DLL; 24-MAR-00.
PDB; 1FV3; 05-SEP-01.
                         SEQUENCE.
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                                                                                                                                                                                                                                                                                                                                                neurotoxin.
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| PRINTES | PROTOTOS, BONDOTOS, BOND
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P45652 haplochromi P51921 pagrus majo P51923 sparus aura Q39618 chlamydomon P24913 herpesvirus Q92812 chlamydia p P91749 clupea pall P01747 mus musculu P01746 mus musculu P02382 emericella Q87ch4 vibrio para Q87ch4 vibrio para Q87ch6 vibrio vuln

GON3_HAPBU
GON3_PAGMA
GON3_SPAGMA
GON3_SFAAU
SFAS_CHLRE
VG10_HSVSA
MALQ_CHLPN
HV03_MOUSE
HV02_MOUSE
RMSS_EMENI
ILVC_VIBPA
ILVC_VIBPA

90 90 90 276 276 526 10 1120 4110 494

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September 24, 2003, 17:00:31; Search time 5.75346 Seconds (without, alignments) 253.383 Million cell updates/sec
        GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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162
1 XHWSYGLRPGSSGPSLOYIKANSKFIGITEL 31
                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                          127863 seqs, 47026705 residues
                                           OM protein - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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Maximum DB seq length: 200000000
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Perfect score:
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

summaries

SwissProt_41:*

Database

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 su



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Score 52; DB 2; Pred. No. 2.6; 0; Mismatches

Length 98;

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C; Species: Haplochromis burtoni
C; Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_change 21-Jul-2000
C; Accession: 150739
From Natl. Acad. Sci. U.S.A. 92, 8363-8367, 1995
A; Title: Three gonadotropin-releasing hormone genes in one organism suggest novel. A; Reterence number: 150739; MUID: 95396797; PMID: 7667296
A; Reterence number: 150739
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Residues: 1-98 < WHID
A;
                                                                gonadotropin-releasing hormone - Cichlid (Haplochromis burtoni)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Search completed: September 24, 2003, 17:49:34 Job time: 11.9058 secs
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Best Local Similarity 88.9%;
Matches 8; Conservative
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A; Experimental source: strain 1021, megaplasmid pSymA
A; Experimental source: strain 1021, megaplasmid pSymA
B; Galibert, F:; Finan, T.M.; Long, S.R.; Puhler, A.; Abola, P.; Ampe, F.; Barloy-Hubler, Pela, D.; Chain, P.; Cowie, A.; Davis, R.W.; Dreano, S.; Federspiel, N.A.; Fisher, R.F.;
Cscience 293, 668-672, 2001
A; Authors: Kahn, D.; Kahn, M.L.; Kalman, S.; Keating, D.H.; Kiss, E.; Komp, C.; Lelaure, hebault, P.; Vandenbol, M.; Vorholter, F.J.; Weidner, S.; Wells, D.H.; Wong, K.; Yeh, K. A; Title: The composite genome of the legume symbiont Sinorhizobium meliloti.
A; Reference number: A96039; MUID: 21368234; PMID: 11474104
                                                                                                                                                                                                                                                                                                                                     C. Species: Gallus gallus (chicken)
C. Species: Gallus gallus (chicken)
C. Date: 21-Feb-1997 #sequence_revision 21-Feb-1997 #text_change 16-Jul-1999
C. Date: 21-Feb-1997 #sequence_revision 21-Feb-1997 #text_change 16-Jul-1999
C. Date: 21-Feb-1997 #sequence_revision 21-Feb-1997 #text_change 16-Jul-1999
C. Accession: I.C.; Chen, Y.; Hook, C.; Sharp, P.J.; Sang, H.M.
J. Mol. Endocrinol: 11, 19-29, 1993
A. Mol. Endocrinol: 150644
A. Mol. Endocrinol: 100644
A. Mol. Endocr
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Pred. No. 1.2;
1; Mismatches 0; Indels
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                                                                                                                                                                                                                                                gonadoliberin I precursor - chicken N.Alternate names: gonadotropin-releasing hormone I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 HWSYGLRPGSSGPSLQYIKANSKFIGITE 30
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C;Keywords: intramolecular lyase; isomerase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           33.3%;
88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HWSYGLQPG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 HWSYGLRPG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
Best Local Similarity
Matches 8; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Gene: SMa1461
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25
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Matches
                                                                                                                                                     RESULT 13
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QQ
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RESULT 15

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The beavy chain V-D-J region (419.1) - mouse (fragment)
C; Species: Mus musculus (house mouse)
C; Date: 19-May-1994 #sequence_revision 19-May-1994 #text_change 17-Mar-1999
C; Accession: G48677
C; Tassignon, J.; Brait, M.; Jamila, I.; Urbain, J.; Gottlieb, P.; Brown, A.; Hasemann
C; Accession: G48677
C; Tassignon, J.; Brait, M.; Jamila, I.; Urbain, J.; Gottlieb, P.; Brown, A.; Hasemann
C; Tassignon, J.; Brait, M.; Jamila, I.; Urbain, J.; Gottlieb, P.; Brown, A.; Hasemann
C; Title: Molecular characterization of monoclonal CRI-A-positive anti-arsonate antibo
A; Reference number: A48677; MUID:94022404; PMID:8415731
A; Accession: G48677
A; Mulliany; not compared with conceptual translation
A; Molecule type: mRNA
A; Residues: 1-123 <TAS>
C; Superfamily: Immunoglobulin V region; immunoglobulin homology
C; Reywords: heterotetramer: immunoglobulin
F; 15-98/Domain: immunoglobulin homology <IMM>
                                                                                                        A; Molecule type: DNA
A; Molecule type: DNA
A; Cross-references: EMBL:218946; NID:g15859; PIDN:CAA79460.1; PID:e59702; PID:g57915;
A; Cross-references: EMBL:218946; NID:g15859; PIDN:CAA79460.1; PID:e59702; PID:g57915;
A; Cross-references: EMBL:218946; NID:g15859; PIDN:CAA79460.1; PID:e59702; PID:g57915;
A; Conetics:
A; Conetics:
A; Canetics:
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A;Title: Superinfection immunity of mycobacteriophage L5: applications for genetic tr A;Reference number: S30949; MUID:93211283; PMID:8459767
A;Accession: S31029
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Monadoliberin I - American alligator
N.Alternate names: gonadotropin-releasing hormone I
C.Species: Alligator mississippiensis (American alligator)
C.Saccies: Alligator mississippiensis (American alligator)
C.Saccession: A60066
R.Lovejoy, D.A.; Fischer, W.H.; Parker, D.B.; McRory, J.E.; Park, M.; Lance, Regul. Pept. 33, 105-116, 1991
A.Title: Primary structure of two forms of gonadotropin-releasing hormone from A.Reference number: A60066; MUID:91352338; PMID:1882082
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C.Superfamily: gonadoliberin
C.Keywords: amidated carboxyl end; hormone; hypothalamus; pyroglutamic acid
F:1/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
F:10/Modified site: amidated carboxyl end (Gly) #status experimental
                                                                       A;Accession: $31029
A;Status: nucleic acid sequence not shown; translation not shown
                                                                                                                                                                                                                                                                                                                                                                                Length 66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 123;
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                                                                                                                                                                                                                                                                                                                                                                                                                                          7;
                                                                                                                                                                                                                                                                                                                                                                                DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
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Pred. No. 0.1;
                                                                                                                                                                                                                                                                                                                                                                                Score 55.5; DB
Pred. No. 0.51;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5 YGL-----RPGSSGPSLQYIKANSKFIGITEL 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 55; DB;
Pred. No. 1.2;
1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5;
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88.9%;
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40.0%;
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Best Local Similarity 40.0
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match 33.3
Best Local Similarity 88.9
Matches 8; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                          14; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
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Best Local S
Matches 14
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                      hypothetical protein B2J23.60 [imported] - Neurospora crassa C; Species: Oboct-2000 #sequence_revision 20-oct-2000 #text_change 20-oct-2000 C; Accession: T55210 R; Schulte, U.; Aign, V.; Hoheisel, J.; Brandt, P.; Fartmann, B.; Holland, R.; Nyakatura, Submitted to the Protein Sequence Database, September 2000 A; Reference number: 226053 A; Accession: T52210 A; Accession: T52210 A; Accession: T52210 A; Status: preliminary A; Molecule type: DNA A; Molecule type: DNA A; Residues: 1-719 <SCH>A; Cross-references: EMBL:AL442164; GSPDB:GN00116; NCSP:B2J23.60
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ÷
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C;Species: Mycobacterium phage L5
C;Species: Mycobacterium phage L5
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 08-Oct-1999
C;Accession: S31029
R;Donnelly-Wu, M.K.; Jacobs Jr., W.R.; Hatfull, G.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        35.8%; Score 58; DB 1; Length 92; 100.0%; Pred. No. 0.32;
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Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        100.0%; Preq. ...
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3 WSYGLRPGSSGPSLQYIKAN 22
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45.0%;
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Best Local Similarity
Matches 9; Conserva
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Matches 9; Conserv
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A; Introns: 349/1; 601/1
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A;Gene: NCSP:B2J23.60
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R;Seeburg, P.H.; Adelman, J.P.
Nature 311, 666-668, 1984
A;Title: Characterization of cDNA for precursor of human luteinizing hormone releasin A;Reference number: A93342; MUID:85012739; PMID:6090951
A;Accession: A93342
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Experimental source: placental trophoblasts
R;Lelbovitz, D:; Koch, Y.; Pitzer, F.; Fridkin, M.; Dantes, A.; Baumeister, W.; Ammere Rs;Lelbovitz, D.; Koch, Y.; Pitzer, F.; Fridkin, M.; Dantes, A.; Baumeister, W.; Ammere State. 346, 203-206, 1994
A;Title: Sequential degradation of the neuropeptide gonadotropin-releasing hormone Dy, A;Reference number: S45718; MUID:94283597; PMID:8013634
A;Contents: annotation; degradation pathway of synthetic hormone
C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A)Description: gonadoliberin stimulates pituitary secretion of lutropin and follitting A;Note: gonadoliberin-associated protein may have prolactin release inhibiting act (S)Superfamily: gonadoliberin (C)Superfamily: gonadoliberin (C)Keywords: amidated carboxyl end; hormone; hypothalamus; placenta; pyroglutamic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              F:37-92/Product: gonadoliberin associated protein #status predicted <GAP>
F:24/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) #status expering 5:33/Modified site: amidated carboxyl end (Gly) (amide in mature form from following)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         N;Alternate names: gonadoliberin-associated protein (GAP); gonadotropin releasing horiontains: gonadoliberin; prolactin release-inhibiting factor C;Species: Rattus norvegicus (Norway rat) boate: Rattus norvegicus (Norway rat) boate: 31-Mar-1988 #sequence_revision 31-Mar-1988 #text_change 18-Jun-1999 C;Accession: A40147; B26173; A48410 R;Bond, C.T., Hayfilck, J.S.; Seeburg, P.H.; Adelman, J.P. Applick, J.S.; Seeburg, P.H.; Adelman, J.P. Aylite: The rat gonadotrophn-releasing hormone: SH locus: structure and hypothalamic A;Reference number: A40147; MUID:89384661; PMID:2476669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A;Cross-references: GB:M31670; NID:g204447; PIDN:AAA41264.1; PID:g204448
R;Adelman, J.P.; Mason, A.J.; Hayflick, J.S.; Seeburg, P.H.
Proc. Natl. Acad. Sci. U.S.A. 83, 179-183, 1986
A;Title: Isolation of the gene and hypothalamic cDNA for the common precursor of gcman A;Reference number: A94090; MUID:86094338; PMID:2867548
A;Accession: B26173
A;Molecule type: mRNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            LHRH-like peptide biosynthesized
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                            A;Cross-references: GB:M12578; NID:g183418; PIDN:AAA35916.1; PID:g386749
                                                                                                                                                                                                                                                                                                                                       A; Molecule type: mRNA
A; Residues: 1-15, 'S', 17-92 <SEE>
A; Cross-references: GB:X01059; NID:g34356; PIDN:CAA25526.1; PID:g34357
A; Experimental source: placenta
R; Tan, L.; Rousseau, P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       .;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           F;1-23/Domain: signal sequence #status predicted <SIG>F;24-92/Product: progonadoliberin #status predicted <PGN>F;24-33/Product: gonadoliberin #status experimental <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Cross-references: GDB:133746; OMIM:227200; OMIM:152760
A;Map position: 8p21-8p11.2
A;Introns: 47/3; 79/3
C;Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Biochem Biophys. Res. Commun. 109, 1061-1071, 1982
A;Title: The chemical identity of the immunoreactive LHI
A;Reference number: A90108; MUID:83126573; PMID:6760865
A;Accession: A90108
                                                                                    A; Experimental source: hypothalamus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Gene: GDB:GNRH; LHRH; GRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 HWSYGLRPG 10
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25 HWSYGLRPG 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Molecule type: protein A; Residues: 24-33 <TAN>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity
Matches 9; Conserv
    A; Residues: 1-92 <ADE>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A; Molecule type: DNA
A; Residues: 1-92 <BON>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Accession: A40147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ga
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N;Alternate names: gonadotropin releasing hormone (GnRH); luteinizing hormone releasing
N;Alternate names: gonadotropin releasing hormone (GPP); progonadoliberin
C;Species: Homo sapiens (man)
C;Date: 17-Mar-1987 #sequence_revision 21-Jul-1995 #text_change 08-Dec-2000
R;Hayflick, J.S.; Adelman, J.P.; Seeburg, P.H.
Nucleic Acids Res. 17, 6403-6404, 1989
A;Title: The complete nucleotide sequence of the human gonadotropin-releasing hormone ge
A;Reference number: 505308.
A;Reference number: 505308; MUID:89366682; PRID:CAA33285.1; PID:931956
B;Accession: S05308
A;Residues: 1-92 cHAY>
A;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A; McDesalule type: DNA
A; Mesidues: 1-90 <MAS>
A; Rosidues: 1-90 <MAS>
A; Rosidues: 1-90 <MAS>
A; Rosidues: 1-90 <MAS>
A; Rosidues: 1-90 <MAS>
A; Toos-references: EMBL:M14872; NID:g193576; PIDN:AAA37717.1; PID:g387175
C; Genetics:
A; Introns: 45/3; 77/3
C; Function:
A; Description: gonadoliberin stimulates pituitary secretion of lutropin and follitropin A; Note: gonadoliberin
C; Reywords: amidated carboxyl end; hormone; hypothalamus; pyroglutamic acid
C; Reywords: amidated carboxyl end; hormone; hypothalamus; pyroglutamic acid
F; 1-23/Domain: signal sequence #status predicted <GIG>
F; 22.3/Product: gonadoliberin-associated protein #status predicted <GAP>
F; 22.3/Product: gonadoliberin-associated protein #status predicted <GAP>
F; 22.7/Modified site: pyrrollidone carboxylic acid (GIn) (in mature form) #status predicted F; 31/Modified site: amidated carboxyl end (GIy) (amide in mature form from following gly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Accession: A47578
R;Mason, A.J.; Hayflick, J.S.; Zoeller, R.T.; Young III, W.S.; Phillips, H.S.; Nikolics, Science 234, 1366-1371, 1986
A;Title: A deletion truncating the gonadotropin-releasing hormone gene is responsible fo A;Reference number: A47578; MUID:87069928; PMID:3024317
A;Accession: A47578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           N;Alternate names: gonadotropin-releasing hormone (GnRH); luteinizing hormone releasing N;Contains: gonadollberin; gonadollberin-associated protein (GAP)
C;Species: Mus musculus (house mouse)
C;Date: 31-Dec-1993 #sequence_revision 18-Mar-1997 #text_change 18-Jun-1999
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                                                                                                                                Length 89;
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                                                                                                                                                                                                               0;
                                                                                        35.8%; Scor.
100.0%; Pred. No. v.
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Best Local Similarity 100.
Matches 9; Conservative
                                                                                                                                                                                                               Conservative
                                   C; Superfamily: gonadoliberin
                                                                                                                                                                                                                                                                                                                                                                               33
                                                                                                                                                                                                                                                                                               2 HWSYGLRPG 10
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                                                                           Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                gonadoliberin precursor
A; Gene: GnRH-I
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A. Molecule type: protein
A. Residues: 1-10 < SUR>
A. Residues: 1-10 < SUR>
A. Note: the natural and synthetic hormones have the same biological activity
A. Note: the natural and synthetic hormone stimulates the secretion of both luteinizing and
C. Comment: This hypothalamic hormone stimulates the secretion of both luteinizing and
C. Superfamily: gonadoliberin
C. Superfamily: gonadoliberin
C. Superfamily: pyrrolidone carboxyle acid (Gln) #status experimental
F:10/Modified site: amidated carboxyle end (Gly) #status experimental
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                                                                                                                                                                                                                                                                                    R;Burgus, R; Butcher, M.; Amoss, M.; Ling, N.; Monahan, M.; Rivier, J.; Fellows, R.; Proc. Natl. Acad. Sci. U.S.A. 69, 278-282, 1972
A;Title: Primary structure of the ovine hypothalamic luteinizing hormone-releasing fa A;Reference number: A93780; MUID:72094314; PMID:4550508
A;Accession: A93780
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Species: Macaca mulatta (rhésus macaque)
C;Date: 02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change 16-Jul-1999
C;Accession: I78541
R;Ma, Y.J.; Costa, M.E.; Ojeda, S.R.
Neuroendocrinology 60, 346-359, 1994
A;Fitle: Developmental expression of the genes encoding transforming growth A;Reference number: I58134; MUID:95124501; PMID:7545971
                                                                                                  gonadoliberin - sheep
C;Species: Ovis orientalis aries, Ovis ammon aries (domestic sheep)
C;Date: 31-Dec.1991 #sequence_revision 31-Dec-1991 #text_change 18-Mar-1997
C;Accession: A93780; A01411
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references; GB:S75918; NID:g912831; PIDN:AAB33096.1; PID:g912832 C;Superfamily: gonadoliberin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               35.8%; Score 58; DB 1; Length 10; 100.0%; Pred. No. 0.027; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 gonadoliberin precursor - rhesus macaque (fragment)
N;Alternate names: luteinizing hormone releasing hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 2;
0.23;
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A;Status: preliminary; translated from GB/EMBL/DDBJ
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Pred. No. 0.23
0; Mismatches
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Best Local Similarity 100.
Matches 9; Conservative
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Best Local Similarity 100.
Matches 9; Conservative
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A; Residues: 1-67 <RES>
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Gracesis: Sus scrofa domestica (domestic pig)

Cracesion: A01411

Rraba, Y.; Matsuo, H.; Schally, A.V.

Blochem. Blophys. Res. Commun. 44, 459-463, 1971

A.Title: Structure of the porcine LH- and FSH-releasing hormone. II. Confirmation of the A.Reference number: A0172; MUID:72114303; PMID:4946067

A.Reference number: A0172; MUID:72114303; PMID:4946067

A.Residues: 1-10 CABAS

A.Residues: 1-10 CABAS

R.Matsuo, H.; Arimura, A.; Nair, R.M.G.; Schally, A.V.

Blochem: Blophys. Res. Commun. 45, 822-827, 1971

A.Title: Synthesis of the porcine LH- and FSH-releasing hormone by the solid-phase method and natural hormones have the same physicochemical and biological A.Rontents: annotation; Synthesis

A.Note: the synthetic and natural hormones have the same physicochemical and biological A.Rontents: annotation and natural hormones have the same physicochemical and biological A.Rontents: annotation aresidue in porcine LH and FSH-releasing hormone.

A.Rochem: Blophys. Res. Commun. 45, 483-487, 1971

A.Title: On the tryptophan residue in porcine LH and FSH-releasing hormone.

A.Rochem: Blophys. Res. Commun. 45, 483-487, 1971

A.Ritle: On the tryptophan residue in porcine LH and FSH-releasing hormone.

A.Rochem: Blophys. Res. Commun. 45, 483-487, 1971

A.Rochem: Blophys. Res. C
                                                                                                                                                                                                                         A; Molecule type: protein
A; Residues: 2-31 < DEE>
A; Residues: 2-31 < DEE>
C; Comment: The source of this protein was an extrachromosomal plasmid.
C; Comment: The precursor is cleaved by endogenous proteinase activity to form light (fra dual chains are not toxic when separated). The amino end of the heavy chain (fragment B) C; Comment: Fragment E forms ion channels in a light bilayer. Fragment C binds to ganglid C; Comment: This potent neurotoxin binds to peripheral neuronal synapses, is internalized presynaptic neurons. It inhibits neurotransmitter release by proteolytic cleavage of sy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C.Function:
A:Description: blocks neuroexocytosis via hydrolysis of a Gln-Phe peptide bond in synapt
R;de Filippis, V.; Vangelista, L.; Schiavo, G.; Tonello, F.; Montecucco, C. Buc. J. Blochem. 229, 61-69, 1995
A;Title: Structural studies on the zinc-endopeptidase light chain of tetanus neurotoxin. A;Reference number: S69348; MUID:95262688; PMID:7744050
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Superfamily: tetanus toxin
C;Superfamily: tetanus toxin
C;Keywords: hydrolase; metalloproteinase; neurotoxin; transmembrane protein; zinc
F;2-457/Product: tentoxylysin light chain (fragment A) #status predicted <TTL>
F;461-1315/Product: tentoxylysin heavy chain (fragment B C) #status experimental <TTH>
F;461-864/Domain: channel forming (fragment B) #status predicted <TXB>
F;865-1315/Domain: ganglioside binding (fragment C) #status predicted <TXC>
F;233,237/Binding site: zinc (His) #status predicted
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Keywords: amidated carboxyl end; hormone; hypothalamus; pyroglutamic acid
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Pred. No. 0.015;
1; Mismatches 0; Indels
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0.027;
0; Indels
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llarity 100.0%; Pred. No. 0.0
Conservative 0; Mismatches
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Best Local Similarity 93.8
Matches 15; Conservative
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Best Local Similarity
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Length 67 0; Indels

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Gaps

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GenCore version 5.1.6
Copyright (c) 1993 · 2003 Compugen Ltd.
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OM protein - protein search, using sw model

September 24, 2003, 17:30:06; Search time 10.9058 Seconds (without alignments) 273.361 Million cell updates/sec Run on:

US-09-848-834A-15 162 1 XHWSYGLRPGSSGPSLQYIKANSKFIGITEL 31 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283308 seqs, 96168682 residues Searched: Total number of hits satisfying chosen parameters:

283308

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR_76:*
1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:* 3 :: :: Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	tentoxilysin (EC 3		gonadoliberin - sh	ď	gonadoliberin prec			gonadoliberin prec	hypothetical prote	gene 84 protein -	Ig heavy chain V-D	gonadoliberin I -	gonadoliberin I pr		gonadotropin-relea	Ig heavy chain V r	isocitrate lyase (Ig kappa chain V r	· Ig kappa chain V r	Ig heavy chain V-D	hypothetical prote	protein-tyrosine-p	qonadoliberin I pr	2	testis-determining	36K antigen pra -				
SUMMARIES	ΩI	BICLIN	RHPGG	RHSHG	178541	151423	RHMSG	RHHUG	RHRTG	T52510	S31029	G48677	RHAQ1	I50644	E95361	150739	PH1491	PH1518	PH1519	PH1494	T06353	C27887	S38715	F48677	AG2249	T14355	RHID1S	A49043	-	A41497	
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æ	Query	46.9						35.8			34.3	34.0	33.3		•			32.1				•	•								
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	Result No.	~	7	3	4	5	9	7	8	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	29	

hypothetical prote hypothetical prote	Ig kappa chain V r Ig kappa chain V r	Ig heavy chain V r Ig heavy chain V r	probable homoserin	probable nomoserin protein C13A10.3 [probable galactara probable galactara	probable galactara	RNA-directed DNA p	hypothetical prote	translation initia	medaka-type gonado
S74928 AI3191	E32530 D27887	PH1516 PH1488	D71103	A88043	C65102 E85974	E91129	RRYC62	T49425	AI0424	JC7393
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49.5	4 4 0 0	49	49	4. 4. V Q	4 0 0	49	49	49	48.5	48
30	33 33	34 35	36	38	39 40	4.1	42	43	44	45

ALIGNMENTS

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	PATCIFIE I
	tentoxilysin (EC 3.4.24.68) precursor - Clostridium tetani
	N;Alternate names: tetanus neurotoxin
	C.Species: Clostridium tetani C.Species: Clostridium tetani
_	C; Accession: A25689; A25757; A25194; B25194; A60759; S69348; S09364
	R.Bisel, U.; Jarausch, W.; Goretzki, K.; Henschen, A.; Engels, J.; Weller, U.; Hudel,
	EMBO 1. 5, 489-2502, 1986 a. nitio. Tetanic tovin. natimary ethiotists synthesis of coli and homology with 1
	A211. Filming Science Cares 2510 in E. Coll, and Domology A25689; MUID:87053814; PMID:3536478
	A;Accession: A25689
	A:Molecule type: DNA Doctain: 121316 (FITE)
	A.Cross-references: GB:X04436: NID:a40769: PIDN:CAA28033.1: PID:a40770
	Nucleic Acids Res. 14, 7809-7812, 1986
	A; Title: The complete nucleotide sequence of tetanus toxin.
	A:Reference number: A25757; MUID:87040747; PMID:3774547 A:Accession: A25757
	A. MOLGOSTI CHARACTORY
	A: Residues: 1-1315 <fai></fai>
	A; Cross-references: GB: X06214; NID: 940773; PIDN: CAA29564.1; PID: 940774
	A; Experimental source: strain CN3911
	R;Fairweather, N.F.; Lyness, V.A.; Pickard, D.J.; Allen, G.; Thomson, R.O.
	A; Title: Cloning, nucleotide sequencing, and expression of tetanus toxin fragment C.:
	A; Reference number: A25194; MUID:86085672; PMID:3510187
	A; Accession: A25194
	A MOLECULE UPPE: DUP. A BACKINGS: 7/3-1315 (FBA)
	A: Cross-references: CR:M12739: NID-0144920: DIDN:AAA23282 1: DID:0144921
	A; Molecule type: protein
	A; Residues: 865-894 <fa3></fa3>
	R; Matsuda, M.; Lei, D.L.; Sugimoto, N.; Ozutsumi, K.; Okabe, T.
	Infect. Immun. 57, 3588-3593, 1989
	A)ILLE: ISOLGALON, PULLICALION, AND CHAIGACHEAGALON OI LIAGHWENL B, LNE NH-Z-LEFIN 1 1. Deference number: 160750, MITTH 100026425, DMITH 1000364
	A; Accession: A60759
	A;Molecule type: protein
	R;Demotz, S.; Lanzavecchia, L.; Eisel, U.; Niemann, H.; Widmann, C.; Corradin, G.
	U. Immunot. 142, 394-402, 1909 A.Mitle. Delineation of several DR-restricted tetamis toxin T. cell enitones
	918; PMID: 2463305
	A; Contents: annotation; epitope region
	R:Schiavo, G.; Benfenati, F.; Poulain, B.; Rossetto, O.; de Laureto, P.P.; DasGupta_
	Nature 559, 622-655, 1994. A.Tille: Telanus and botulinum-B neurotoxins block neurotransmitter release by prote
	A;Reference number: S27125; MUID:93063293; PMID:1331807
_	A; Contents: annotation

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US-09-785-215-4

i Sequence 4, Application US/09785215

publication No. US20020187157A1

GENERAL INFORMATION:
APPLICANT: JENSEN, Martin Roland et al.
TILLE OF INVENTION: NOVEL METHOD FOR DOWN-REGULATION OF AMYLOID
FILE REFERENCE: 3631-0107P

CURRENT APPLICATION NUMBER: US/09/785,215

CURRENT FILING DATE: 2001-02-20

NUMBER OF SEQ ID NOS: 19

SOFTWARE: Patentin Version 3.1

SEQ ID NO 4

LENGTH: 15
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45.7%; Score 74; DB 10; Length 15;
Best Local Similarity 100.0%; Pred. No. 0.00052;
Matches 15; Conservative 0; Mismatches 0; Indels
                                     Ouery Match 45.7%; Score 74; DB 9; Length 15; Best Local Similarity 100.0%; Pred. No. 0.00052; Matches 15; Conservative 0; Mismatches 0; Indels
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                                                                                                                TYPE: PRT; ORGANISM: Clostridium tetani
US-09-785-215-4
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US-09-862-849-2
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Sequence 2, Application US/09862849
Patent No. US20020013274A1
GENERAL INFORMATION
APPLICANT: Sudhir Paul
APPLICANT: Gennady Gololobov
TITLE OF INVENTION: Methods for Identifying Inducers and Inhibitors of Proteolyti:
FILE REFERENCE: UNMC 63123 DIV
CURRENT APPLICATION NUMBER: US/09/862,849
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION NUMBER: US 09/046,373
PRIOR APPLICATION NUMBER: US 09/046,373
NUMBER OF SEQ ID NOS: 10
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                                                                                            Score 76; DB 12; Length 887; Pred. No. 0.023;
                                                                                                                                                      0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Microbiological Research Authority
APPLICANT: The Speywood Laboratory Limited
TITLE OF INVENTION: Recombinant Toxin Fragments
FILE REPRENCE: 1581.0130003
CURRENT PELICATION NUMBER: US/10/241,596
CURRENT FILING DATE: 2002-09-12
PRIOR FILING DATE: 1999-02-33
PRIOR FILING DATE: 1999-02-23
PRIOR APPLICATION NUMBER: US 09/242,689
PRIOR FILING DATE: 1999-02-23
PRIOR APPLICATION NUMBER: PCT/GB97/02273
PRIOR FILING DATE: 1997-02-23
PRIOR FILING DATE: 1997-02-23
PRIOR FILING DATE: 1997-08-22
PRIOR APPLICATION NUMBER: US 08/782,893
PRIOR APPLICATION NUMBER: GS 962596.5
PRIOR PRIOR APPLICATION NUMBER: GS 962596.5
PRIOR FILING DATE: 1996-12-13
PRIOR FILING DATE: 1996-12-13
PRIOR FILING DATE: 1996-12-13
                                                                                                                                                      Mismatches
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Publication No. US20030166238A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                   16 LQYIKANSKFIGITEL 31
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                                                                                         Query Match
Best Local Similarity 93.8%;
Matches 15; Conservative
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SOFTWARE: PatentIn version 3.1
; ORGANISM: Clostridium tetani US-10-241-596-147
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT ORGANISM: Clostridium tetani
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US-10-241-596-141
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LENGTH: 1315
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LENGTH: 15
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APPLICANT: Microbiological Research Authority
APPLICANT: The Speywood Laboratory Limited
TITLE OF INVENTION: Recombinant Toxin Fragments
FILE REFERENCE: 1561.0130003
CURRENT FILING DATE: 2002-09-12
PRIOR APPLICATION NUMBER: US 09/25,829
PRIOR FILING DATE: 1999-02-23
PRIOR APPLICATION NUMBER: US 09/25,829
PRIOR FILING DATE: 1999-02-23
PRIOR APPLICATION NUMBER: PCT/GB97/02273
PRIOR APPLICATION NUMBER: PCT/GB97/02273
PRIOR APPLICATION NUMBER: US 08/782,893
PRIOR APPLICATION NUMBER: US 08/782,893
PRIOR FILING DATE: 1997-08-22
PRIOR APPLICATION NUMBER: GB 9625996.5
PRIOR APPLICATION NUMBER: GB 9625996.5
PRIOR FILING DATE: 1996-12-13
PRIOR FILING DATE: 1996-12-13
PRIOR FILING DATE: 1996-12-13
PRIOR FILING DATE: 1996-12-13
PRIOR FILING DATE: 1996-08-23
PRIOR FILING DATE: 1996-08-23
PRIOR FILING DATE: 1996-12-13
PRIOR FILING DATE: 1996-08-33
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Publication No. US20030166238A1
GENERAL INFORMATION:
APPLICANT: Microbiological Research Authority
APPLICANT: The Speywood Laboratory Limited
TILE OF INVENTION: Recombinant Toxin Fragments
FILE REFERENCE: 1581.0130003
CURRENT APPLICATION NUMBER: US/10/241,596
CURRENT FILING DATE: 1909-09-15
PRIOR APPLICATION NUMBER: US 09/255,829
PRIOR FILING DATE: 1999-02-23
PRIOR PRILING DATE: 1999-02-23
PRIOR FILING DATE: 1999-02-23
PRIOR FILING DATE: 1997-08-22
PRIOR APPLICATION NUMBER: US 08/782,893
PRIOR FILING DATE: 1996-12-27
PRIOR APPLICATION NUMBER: GB 9625996.5
PRIOR PRILING DATE: 1996-12-27
PRIOR APPLICATION NUMBER: GB 9625996.5
PRIOR APPLICATION NUMBER: GB 9625996.5
PRIOR PRILING DATE: 1996-12-13
PRIOR FILING DATE: 1996-12-13
PRIOR PLING DATE: 1996-12-13
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                                                                                                                                                                                                              Sequence 143, Application US/10241596
Publication No. US20030166238A1
GENERAL INFORMATION:
                                    16 LQYIKANSKFIGITEL 31
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SOFTWARE: Patentin version 3.1
SEQ ID NO 147
LENGTH: 887
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; ORGANISM: Clostridium tetani
US-10-241-596-143
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 93.89
Matches 15; Conservative
                                                                                                                                                                                     US-10-241-596-143
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US-10-241-596-147
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Gaps
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. OTHER INFORMATION: Amino acid sequence 829-844 of the Tetanus
. OTHER INFORMATION: Toxoid Precursor (Tentoxylysin)
US-09-848-8348-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   46.9%; Score 76; DB 12; Length 872; 93.8%; Pred. No. 0.023;
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US.10-241-596-145

Sequence 145, Application US/10241596

Publication No. US20030166238A1

GENERAL INFORMATION:
APPLICANT: Microbiological Research Authority
APPLICANT: The Speywood Laboratory Limited
TITLE OF INVENTION: Recombinant Toxin Fragments
FILE REFERENCE: 1581.013003

CURRENT APPLICATION NUMBER: US/02/21,596

CURRENT FILING DATE: 1999-02-03

PRIOR FILING DATE: 1999-02-23

PRIOR FILING DATE: 1999-02-23

PRIOR FILING DATE: 1999-02-23

PRIOR APPLICATION NUMBER: US 09/24,689

PRIOR FILING DATE: 1996-02-23

PRIOR FILING DATE: 1996-02-23

PRIOR FILING DATE: 1996-12-77

PRIOR FILING DATE: 1996-12-13

SEQUENCE: DATE: 1996-13

NUMBER OF SEQ ID NOS: 175

SEQUENCE: AND SECONDERS

FERNORMERS

FERNORMER
                                                                                                                                                                                                       sequence 2, Application US/09848834A
Fatent No. US20020076416A1
GENERAL INFORMATION:
APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimmeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 46.9%; Score 76; DB 9; I
Best Local Similarity 93.8%; Pred. No. 0.00029;
Matches 15; Conservative 1; Mismatches 0;
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SOFTWARE: PatentIn version 3.0
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                 2 HWSYGLRPGSSGPSL 16
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TYPE: PRT ORGANISM: Tetanus bacillus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 93.8 Matches 15; Conservative
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LENGTH: 16
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OTHER INFORMATION: Amino acid sequence 947-967 of the Tetanus toxoid precursor (Tent
OTHER INFORMATION: Oxylysin
NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of human OTHER INFORMATION: GRRH linked by a spacer to amino acid sequence 947-967 of the Tet OTHER INFORMATION: anus toxoid precursor (Tentoxylysin) protein linked by a spacer to OTHER INFORMATION: o amino acid sequence 2-10 of human GRRH
NAME/KEY: PEPTIDE
LOCATION: (1)...(10)
OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone
NAME/KEY: PEPTIDE
LOCATION: (11)...(16)
OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTIDE
LOCATION: (17)...(37)
OTHER INFORMATION: (Tentoxylysin)
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OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone NAME/KEY: PEPTIDE
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                                                                                                                                                                                                                                                                                                                                                                                                     53.7%; Score 87; DB 9; Length 37; 100.0%; Pred. No. 1.9e-05; tive 0; Mismatches 0; Indels
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OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
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OTHER INFORMATION: Amidated glycine or glycinamide
NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-01-09 -848-834A-18
Sequence 18, Application US/09848834A
Sequence 18, Application US/09848834A
Patent No. US20020006416A1
GENERAL INFORMATION:
APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR PAPLICATION NUMBER: 60/202,328
PRIOR PILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SEQ ID NOS: 20
SEQ ID NO 18
LENGTH: 50
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OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTIDE
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OTHER INFORMATION: Spacer peptide
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Matches 15; Conservative
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Matches 15; Conservative
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LOCATION: (1)..(1)
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OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of h_m OTHER INFORMATION: GnRH linked by a spacer to amino acid sequence 378-398 of Pl.s. OTHER INFORMATION: ium falciparum circumsporozoite (CSP) protein NAME/KEY: MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of tLe OTHER INFORMATION: nRH hormone linked by a spacer to amino acid sequence 947-96—OTHER INFORMATION: the Tetanus toxoid precursor (Tentoxylysin)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone NAME/KEY: PEPTIDE LOCATION: (11). (16)
OTHER INFORMATION: Spacer peptide
LOCATION: (17)..(36)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      : LOCATION: (43)..(51)
; OTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH hormone
US-09-848-834A-20
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                                                                                                                                                                                                                                                                                                                                                                 LOCATION: (1)..(1)
OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
NAME/KEY: MOD_RES
LOCATION: (51)..(51)
OTHER INFORMATION: Amidated glycine or glycinamide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: MOD_RES
LOCATION: (1)..(1)
OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
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Pred. No. 1.4e-05;
2; Mismatches 3;
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TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRICR APPLICATION NUMBER: 60/202,328
PRICR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.0
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
SOFTWARE: PACENTIN NOS: 20
SOFTWARE: PACENTIN VESSION 3.0
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. Sequence 14, Application US/09848834A
. Patent No. US20020076416A1
. GENERAL INFORMATION:
                                                                                                                                                                                                                                 ORGANISM: Artificial Sequence
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63.38;
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Best Local Similarity 63.3
Matches 19; Conservative
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                                                                                                                                                              SEQ ID NO 20
LENGTH: 51
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LOCATION: (1)..(1)
NAME/KEY: MOD_RES
LOCATION: (47)..(37)
OTHER INFORMATION: Amidated-glycine or glycinamide
NAME/KEY: PEPTIDE
LOCATION: (1)..(10)
OTHER INFORMATION: Amino acid sequence 1-10 of the human GRH hormone
NAME/KEY: PEPTIDE
LOCATION: (11)..(18)
OTHER INFORMATION: Spacer peptide
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OTHER INFORMATION: Amino acid sequence 288-302 of the Measles virus fusion protein,
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                                                                                                 Gaps
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OTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
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                                                 Length 36;
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                                               Score 89; DB 9; Le
Pred. No. 9.5e-06;
2; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR PILLING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin Version 3.0
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US-09-848-834A-20
S Sequence 20, Application US/09848834A
S Patent No. US20020076416A1
GENERAL INFORMATION:
APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
                                                                                                                                                              2 HWSYGLRPGSSGPSL----QYIKANSKF 25
                                                                                                                                                                                                                                                                                            Sequence 17, Application US/09848834A
Patent No. US20020076416A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           LOCATION: (35)...(38)
OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HWSYGLRPGSSGPSLKLL 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 HWSYGLRPGSSGPSLQYI 19
                                             54.98;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Local Similarity 83.3
Matches 15; Conservative
                                                                                            Conservative
                                                                  Local Similarity
nes 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: PEPTIDE
US-09-848-834A-16
                                                                                                                                                                                                                                                                         US-09-848-834A-17
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 17
LENGTH: 47
                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                          Matches
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FEATURE:

CHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of the OTHER INFORMATION: RH hormone linked by a spacer to amino acid sequence 288-302 o OTHER INFORMATION: RH hormone linked by a spacer to amino acid sequence 288-302 o OTHER INFORMATION: RH hormone linked by a spacer to amino acid sequence 288-302 o OTHER INFORMATION: (1)...(10)

OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone NAME/REY: PEPTIDE
LOCATION: (11)...(18)

OTHER INFORMATION: Spacer peptide
LOCATION: (19)...(34)

OTHER INFORMATION: Amino acid sequence 288-302 of the Measles

OTHER INFORMATION: Virus fusion protein, F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of the OTHER INFORMATION: RH hormone linked by a spacer to amino acid sequence 378-398 of OTHER INFORMATION: the Plasmodium falciparum circumsporozoite (CSP) protein NAME/KEY: MOD_RES LOCATION: (1). (1) OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCATION: (1)\dots(10) OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ó
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME.KEY: MOD_RES
LOCATION: (1)..(1)
OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2; Mismatches
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
SUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: PEPTIDE
COCATION: (11)..(16)
OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 HWSYGLRPGSSGPSLQYI 19
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                                                                                                                                                                        TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best_Local Similarity 83.33
Matches 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; OTHER INFORMAT
US-09-848-834A-13
                                                                                                                        SEQ ID NO 13
LENGTH: 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
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NAME/KEX: MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION: (17)..(31)
OTHER INFORMATION: Amino acid sequence 830-844 of the Tetanus toxoid precursor OTHER INFORMATION: (Tentoxylysin)
NAME/KEY: PEPTIDE
LOCATION: (32)..(37)
OTHER INFORMATION: Spacer peptide
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LOCATION: (1)..(10)
OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone
NAME/KEY: PEPTIDE
LOCATION: (11)..(16)
OTHER INFORMATION: Spacer peptide
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LOCATION: (38)..(46)
OTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH hormone
                              Gaps
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                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION: (1)..(1)
OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
NAME/KEY: MOD_RES
LOCATION: (46)..(46)
OTHER INFORMATION: Amidated glycine or glycinamide
100.0%; Pred. No. 3.8e-16;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 110.2865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
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APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 110.2865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
                                                                                                   2 HWSYGLRPGSSGPSLQYIKANSKFIGITEL 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 HWSYGLRPGSSGPSLQYIKANSKFIGITEL 31
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                                                                          2 HWSYGLRPGSSGPSLQYIKANSKFIGITEL 31
                                                                                                                                                                                            RESULT 2
US-00-848-834A-19
Sequence 19, Application US/09848834A
; Patent No. US20020076416A1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 20
SOFTWARE: PatentIn version 3.0
SEQ ID NO 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Local Similarity 100.
Matches 30; Conservative
                         30; Conservative
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: PEPTIDE LOCATION: (17)..(3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-09-848-834A-19
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                         Matches
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GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
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OM protein - protein search, using sw model

September 24, 2003, 16:57:10 ; Search time 15.5429 Seconds Run on:

(without alignments) 301.778 Million cell updates/sec

Perfect score:

US-09-848-834A-15 162 1 XHWSYGLRPGSSGPSLQYIKANSKFIGITEL 31 Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

566894 seqs, 151307093 residues Searched: Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database

Published_Applications_AA:*

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

/cgn2_6/ptodata/2/pubpaa/US60_NEW_PUB.pep:* /cgn2_6/ptodata/2/pubpaa/US60_PUBCOMB.pep:*

SUMMARIES

		æ				
Result No.	Score	Query Match	Query Match Length DB	DB	DI	Description
		:		1		
-	161		31	σ	US-09-848-834A-15	Seguence 15, Appl
7	161		46	σ	US-09-848-834A-19	19,
ю	88		34	6	US-09-848-834A-13	13,
4	89		36	σ	US-09-848-834A-16	16,
S	88		47	σ	US-09-848-834A-17	17,
9	88		51	6	US-09-848-834A-20	20,
7	87		37	σ	US-09-848-834A-14	Sequence 14, Appl
ω	87		20	σ	US-09-848-834A-18	18,
o	16	46.9	16	σ	US-09-848-834A-2	2. A
10	16		872	12	US-10-241-596-145	Sequence 145, App
11	16		879	12	US-10-241-596-143	Sequence 143, App
12	92	46.9	887	12	US-10-241-596-147	Sequence 147, App
13	97		1315	12	US-10-241-596-141	Sequence 141, App
14	74	45.7	15	6	US-09-862-849-2	Sequence 2, Appli
15	74	45.7	15	10	US-09-785-215-4	Sequence 4, Appli

24 21 8 8 1 1 8 8 1 1 8 8 1 1 8 8 1 1 8 1 1 8 1 1 8 1	Sequence 13, Appl Sequence 1, Appli Sequence 4, Appli Sequence 19, Appl Sequence 618, App	Sequence 7, Appli Sequence 7, Appli Sequence 64, Appli Sequence 619, Appl Sequence 620, Appl Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli Sequence 8, Appli Sequence 8, Appli Sequence 3, Appli Sequence 3, Appli Sequence 34, Appli Sequence 34, Appli Sequence 3, Appli Sequence 9, Appli Sequence 1, Appli Sequence 9, Appli Sequence 1, Appli Sequence 9, Appli Sequence 1, Appli Sequence 1, Appli Sequence 1, Appli	Sequence 709, App Sequence 760, App Sequence 710, App
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45.7 455	45.7 15 45.7 15 45.7 15 45.7 15	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
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ALIGNMENTS

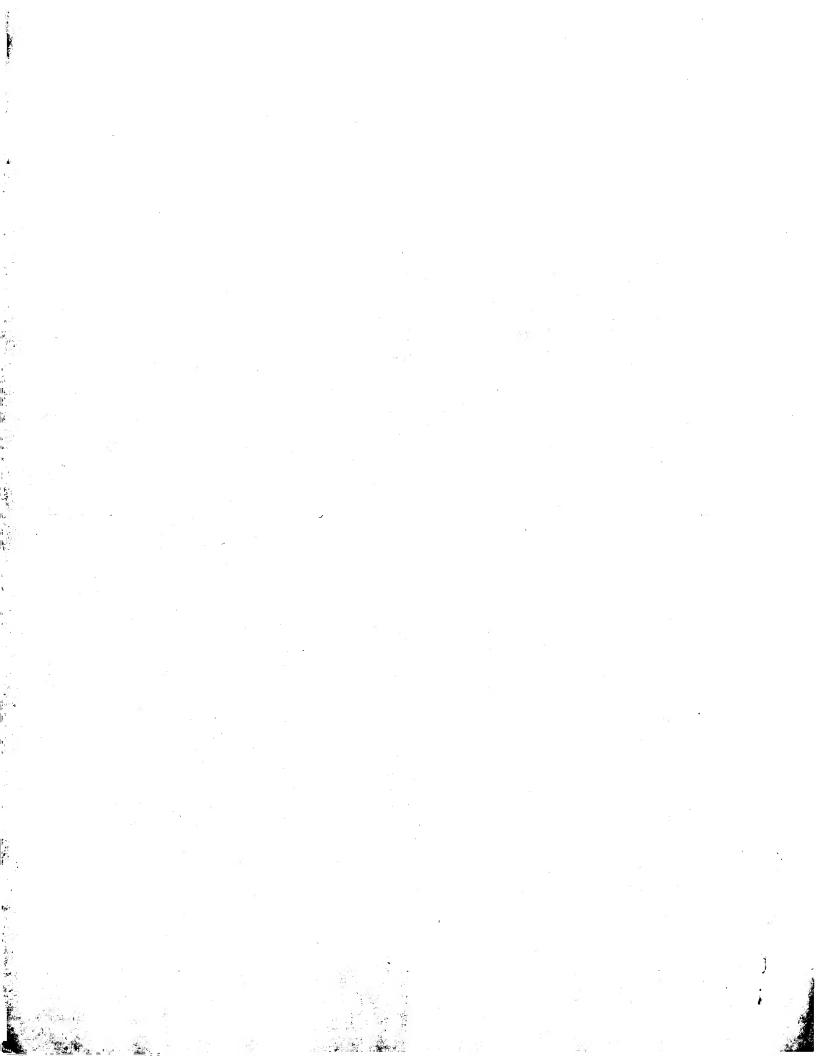
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OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of the OTHER INFORMATION: RH hormone linked by a spacer to amino sequence 830-844 of the OTHER INFORMATION: tanus toxoid precursor (Tentoxylysin)

NAME,KEY: MOD_RES
LOCATION: (1)...(1)

OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CCATION: (17)...(31)
CTHER INFORMATION: (Tentoxylysin)
CTHER INFORMATION: (Tentoxylysin)
US-09-848-834A-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: PEPTIDE LOCATION: (1)..(10) OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone
                                                                           GENERAL INFORMATION:
APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
TITLE OF INVENTION: Chimeric Peptide Immunogens:
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR PILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.0
SOFTWARE: Patentin version 3.0
LENGTH: 31
                              Sequence 15, Application US/09848834A Patent No. US20020076416A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCATION: (11)..(16)
OTHER INFORMATION: Spacer peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: PEPTIDE
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US-09-848-834A-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
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99.4%; Score 161; DB 9; Length 31;

Query Match



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September 24, 2003, 17:40:07 secs
                                                WPI; 2001-502469/55
  (OMPH-) OM-PHARMA.
                                                                                                                                                                                                                                                                                                                                                                                                              33 AA;
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Job time: 41.687
                          Bauer J,
                                                                                                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                vaccines
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                                                                                                                                                                                                                                                             This sequence represents the RTS* hybrid protein which is encoded by the RTS* expression cassette. This hybrid consists of a methionine residue derived from S. cerevisiae TDH3 gene sequence, three amino acids, Met-Ala-Pro, derived from a nucleotide sequence created by the cloning procedure used to construct the hybrid gene, a stretch of 189 amino acids representing amino acids 10 to 398 of the circumsporozoite protien (CSP) of plasmodium falciparum strain NF54, an amino acid Arg created by the cloning procedure, four amino acids, Pro-Val-Thr-Asn, representing the four achoxy terminal residues of hepatitis B virus (HBV), adw serotype, preS2 protein, and a stretch of 226 amino acids specifying the S protein of HBV, adw serotype. This protein, and RTS (see also ARM37796), may be combined with an adjuvant and used in a vaccine for preventing plasmodium infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pseudopeptide; immunomodulation; adjuvant; antigen presenting cell; macrophage; dendritic cell; vaccine; autoimmune disease.
                                                                                                                                                                                            Hybrid protein comprising Plasmodium circumsporozoite protein and HBsAg – useful as a vaccine for treating patients susceptible to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 424;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             49.7%; Score 91; DB 14; Length 42
55.3%; Pred. No. 0.00011;
Live 3; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptide comprising conjugation sites for a pseudopeptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            7 LRPGSSGPSLD-----EKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                                                                                                                                                                               Updated on 25-MAR-2003 to correct PN field.)
                                                                                                          (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAG63663 standard; peptide; 33 AA.
                                                                                                                                                                                                                                          Disclosure; Fig 9; 59pp; English.
                                               92WO-EP02591.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99WO-IB02038
                                                                       91GB-0024390
                                                                                 92US-0842694
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 55.39
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                29-OCT-2001 (first entry)
                                                                                                                                                                                                        HBsAg - useful as a ve
Plasmodium infections
                                                                                                                                 De Wilde M;
                                                                                                                                                       WPI; 1993-182494/22.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       424 AA;
                                                                                                                                                                    N-PSDB; AAQ42567
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WO200146127-A1.
WO9310152-A1
                                              11-NOV-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22-DEC-1999;
                                                                       16-NOV-1991;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-DEC-1999;
                                                                                27-FEB-1992;
                       27-MAY-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 28-JUN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAG63663;
                                                                                                                                  Cohen J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAG63663
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The specification describes N-Acylated pseudopeptides, which have a neutral or charged acidic group at one terminal and a functionalized auxiliary spacer at the other. The pseudopeptides show immunomodulatory and adjuvant action, based on activation of antigen presenting cells dendritic cells, induction of differentiation of dendritic cells, induction and induction of maturation of immunocompetent cells trains originating from hematopoeitic and lymphoid organs. They reinforce humoral and cellular immunity. They can be grafted onto antigens (to modulate immune response) or onto drugs (to improve the therapeutic activity or targeting). The pseudopeptides are thus useful in human or veterinary medicine as immunizing or diagnostic agents. Typically, they are used as adjuvants together with (or covalently bonded to) antigens for vaccination against viral, parasitic/protozoal, microbial or fungal infections; incubated with blood
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     realise x vivo, to render the cells immunocompetent before reintroduction in vivo; or used in therapy of certain autoimmune diseases. The pseudopeptides are useful as carriers for antigens or other therapeutic agents due to their ability to form non-covalent bonds via the hydrophobic or hydrophilic auxiliary spacer. The present sequence represents a peptide, which has conjugation sites for the pseudopeptides
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                      New amphiphilic acylated pseudopeptides having a functionalized auxiliary spacer, useful as immunomodulators, e.g. as adjuvants in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  48.9%; Score 89.5; DB 22; 76.9%; Pred. No. 9e-06; iive 3; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  11 SSGPSLDEKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rodriquez S;
                                                                                                                                                                                                                                                                                                                                                      Example 3; Page 61; 166pp; French.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity 76.9 tes 20; Conservative
Martin OR,
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(SMIK ) SMITHKLINE BEECHAM BIOLOGICALS
                                  WPI; 1993-182494/22.
                                                                                                                                                                                                                                                            424 AA;
                                           N-PSDB; AAQ42566
                                                                                                                                                                                                                                                                                                                                                                                                                                 RTS* protein.
                                                                                                                                                                                                                                                                                                                                                                                                        25-MAR-2003
27-SEP-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic
                                                                                                                                                                                                                                                             Seguence
                                                                                                                                                                                                                                                                                                                                                                                        AAR37797;
                   Cohen J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Region
                                                                                                                                                                                                                                                                                                                                                      RESULT 14
   δy
                                                                                                                                                                                                                                                                                                                             Ωp
                                                                                                                                                                                                                                                                                                                                                                                 ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                 'note= "Derived from S. cerevisiae TDH3 gene sequence"
                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note= "Carboxy terminal amino acids from HBV (adw
                                                                                                                   The Plasmodium CS gene was used to isolate peptides capable of inducing an immune response to the parasite. Peptide antigens may be synthesised in pure form and used to generate an immune response in vaccination against malaria. The featured repeat units are claimed and must be present in copies of 2-1000. (Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "Represents amino acids 210-398 of the CSP
                                                                                                                                                                                                                                                                                                                                                                    RTS; expression cassette; hybrid protein; S. cerevisiae; TDH3; cloning; circumsporozoite protien; CSP; Plasmodium falciparum; strain 768; hepatitis B virus; HBV; adw serotype; pres2 protein;
                                                                           New immunologically active pure synthetic peptide(s) - used for protection against infection by malaria parasite.
                                                                                                                                                                                                                   ..
8
                                                                                                                                                                                                 Length 412;
                                                                                                                                                                                               Score 91, DB 7; Length 412
Pred. No. 0.00011;
3; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           198..424
/note= "S protein of HBV (adw serotype)"
                                                                                                                                                                                                                                            Schneider I;
                                                                                                                                                                                                                                  7 LRPGSSGPSLD-----EKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      serotype) preS2 protein"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'note= "Cloning artefact"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            P. falciparum"
                                  Williams JL,
                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                           AAR37796 standard; Protein; 424 AA
                                                                                                    Disclosure; Fig 2; 49pp; English.
                                                                                                                                                                                                 49.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      91GB-0024390.
92US-0842694.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       92WO-EP02591
) US SEC OF COMMERCE.
) US GOVERNMENT.
) US SEC OF ARMY.
                                                                                                                                                                                                                                                                                                                             (updated)
(first entry)
                                                                                                                                                                                                                 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  194..197
                                  McCutchan TF, Dame JB,
                                                                                                                                                                                               Query Match
Best Local Similarity
                                                 WPI; 1986-008635/02.
                                                                                                                                                                                412 AA;
                                                          N-PSDB; AAN60362
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     16-NOV-1991;
27-FEB-1992;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO9310152-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      11-NOV-1992;
                                                                                                                                                                                                                                                                                                                           25-MAR-2003
27-SEP-1993
                                                                                                                                                                                                                                                                                                                                                      RTS protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27-MAY-1993
                                                                                                                                                                                                                                                                                                                                                                                                S protein.
                                                                                                                                                                                 Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic
                                                                                                                                                                                                                                                                                                           AAR37796;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                         Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Region
(USDC
(USGO
(USSA
                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                           RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                  Kev
                                                                                                                                                                                                                                                                                   AAR37796
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note= "Derived from S. cerevisiae TDH3 gene sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                 the RTS expression cassette. This hybrid consists of a methionine residue derived from S. cerevislae TDH3 gene sequence, three amino acids, Met Ala-Pro, derived from a nucleotide sequence, three amino acids method from a nucleotide sequence created by the cloning procedure used to construct the hybrid gene, a stretch of 189 amino acids representing amino acids 210 to 398 of the circumsporozotic protien (CSP) of plasmodium falciparum strain 768, an amino acid Arg created by the cloning procedure, four amino acids pro-Val-Thr-Asn, representing the four carboxy terminal residues of hepatitis B virus (HBV), adw serotype, preS2 protein, and a stretch of 256 amino acids specifying the S protein of HBV, adw serotype. This protein, and RTS* (see also AAR37797), may be combined with adjuvant and used in a vaccine for preventing plasmodium infections. The vaccines produce a humoral response and also a cellular immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "Represents amino acids 210-398 of the CSP of P. falciparum"
                                                                                                                                                                                                                                                                                                                                                                                           This sequence represents the RTS hybrid protein which is encoded by
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "Carboxy terminal amino acids from HBV (adw serotype) preS2 protein"
                                                                                                                                                                         Hybrid protein comprising Plasmodium circumsporozoite protein and HBsAg – useful as a vaccine for treating patients susceptible to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RTS; expression cassette; hybrid protein; S. cerevisiae; TDH3; cloning; circumsporozoite protien; CSP; Plasmodium falciparum; strain 7G8; hepatitis B virus; HBV; adw serotype; pres2 protein; S protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .;
8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 91; DB 14; Length 424;
Pred. No. 0.00011;
3; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "S protein of HBV (adw serotype)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7 LRPGSSGPSLD-----EKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'note- "Cloning artefact"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAR37797 standard; Protein; 424 AA
                                                                                                                                                                                                                                                                                                                     Disclosure; Fig 5; 59pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           49.7%;
55.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (updated)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 55.3%
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        194..197
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                198..424
                                                                                                                                                                                                                                               Plasmodium infections
De Wilde M;
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Sequence of the CS gene (AAN81108) is from lambda-mpfl. A recombinant DNA molecule is claimed, comprising functional DNA coding sequence fused, in phase, to a portion of the Pre-S2 region of a hepatitis B virus (HBV) Pre-S2-S protein coding sequence. The functional DNA coding sequence comprises the Pre-S2 coding sequence, Pre-S1 coding sequence or entire Plasmodium, or a HIV coding sequence such as an HIV envelope gene sequence, e.g. HIV C7 protein coding region, HIV Peptide 121 coding region, or HIV Dreesman peptide coding region, HIV (Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                        DNA encoding hepatitis B virus antigens and hybrids contg. them used for expression in yeast to obtain vaccines and bivalent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 411;
/note="Repeat region, repeat unit = NANP"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           360 IKPGSANKPKDELDYENDIEKKICKMEKCSSVFNVVNS 397
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7 LRPGSSGPSLD-----EKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ouery Match 49.7%; Score 91; DB 9; Le Best Local Similarity 55.3%; Pred. No. 0.00011; Matches 21; Conservative 3; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                               Example; Fig 3Aa-3Af; 101pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       124..127
/label= Repeat unit
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Location/Qualifiers
                                                                                                                                                                                                                                   Harford N;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAP60416 standard; Protein; 412
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CS protein of malaria parasite.
                                                                                                          88EP-0870008
                                                                                                                                           87US-0009325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  85EP-0107794
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   84US-0624564
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (updated)
(first entry)
                                                                                                                                                                              KLINE-RIT.
KLINE-RIT.
                                                                                                                                                                                                                                   Cabezon T, De Wilde M,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sporozoite; vaccination
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Plasmodium falciparum.
                                                                                                                                                                                                                                                                    WPI; 1988-229751/33.
N-PSDB; AAN81108.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  411 AA;
                                                                                                                                                                              (SMIK ) SMITH
(SKFK ) SMITH
                                                                                                          25-JAN-1988;
                                                                                                                                           30-JAN-1987;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              24-JUN-1985;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   26-JUN-1984;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-MAR-2003
13-JUN-1991
                                                                      17-AUG-1988
                                     EP278940-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EP166410-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAP60416;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                               vaccines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAP60416
 qq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Qγ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1;
                                                                                                                                                                                                                                                                                                                                     the P. falciparum circumporozoite (CS) protein [Dame et al., Science 225: 593 (1984)], and the influenza virus non-structural protein 1 (NSI), [Baez et al., Nucleic Acids Research, 8: 5945 (1980)]. The DNA encoding the 1st 81 AAs of the N-terminal of NSI (1980)]. The DNA encoding the 1st 81 AAs of the N-terminal of NSI (NSI 81) is linked to a synthetic sequence encoding four repeat units (the variant form) from the immunodominant region, which in turn is linked via a synthetic sequence to DNA encoding Region II-contg. Contg. flanking region II-contg. flanking the Asp (at the C-terminal of the linker) from the Region I-contg. CS flanking region is an artifact of a filledin BamHI site, the Gly separating the Region II-contg. CS flanking region I and II-contg. CS flanking region I and III-contg. CS flanking region is an artifact of a filledin regions. The peptide can be used in a vaccine for protection
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                      The polypeptide is prepd. by genetic engineering of genes encoding
                                                                                                                                                                                                                                 Polypeptide comprising immunogenic determinants from P falciparum for vaccine against malaria infection in humans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        8;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /note="Repeat region, repeat unit = NANP"
123..146
//note="Repeat region, repeat unit = NANPNVDP"
211..286
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 335;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence encoded by the circumsporozoite (CS) gene from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7 LRPGSSGPSLD-----EKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Vaccine; antigen; immunogen; probe; hybridisation; immunoassay; dlagnosis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 91; DB 12; Le
Pred. No. 8.5e-05;
3; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          See also AAR12306-R12311 and AAR13175-R13178. (Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                            Hollingdale MR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAP83144 standard; protein; 411 AA.
                                                                                                                                                                                                                                                                                     Example 5; Page 11; 18pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        106..120
/note="Region 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     49.7%;
                                   89US-0447746.
90EP-0313257
                                                                                     US SEC OF ARMY.
BIOMEDICAL RES INST.
GROSS M S.
                                                                      SMIK ) SMITHKLINE BEECHAM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (updated)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity 55.3 les 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ..206
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Plasmodium falciparum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Plasmodium falciparum.
                                                                                                                                                              Gordon DM,
                                                                                                                                                                                             WPI; 1991-179771/25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  335 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         against malaria
06-DEC-1990;
                                   08-DEC-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25-MAR-2003
20-NOV-1990
                                                                                                                                                              Gross MS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAP83144;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                        (BIOM-)
(GROS/)
                                                                                       USSA )
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Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 11
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δ pp ij

Gaps

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Peptide
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Region
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                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                        RESULT 10
                                                                                                                                                                                                                                                                 AAR13179
   δλ
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                                     <del>.</del>;
                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Polypeptide comprising immunogenic determinants from P falciparum for vaccine against malaria infection in humans.
                                                                                                                                                                                                                                                      1..81
/label= N-terminal of NS1
/note= "Influenza virus nonstructural protein 1"
                                                                                                                                                                                         Immunogenic determinant; circumsporozoite; CS; vaccine; malaria; hybrid; influenza virus; non-structural protein 1; fusion.
                                     .;
8
                                                                                                                                                                                                                                                                                                                                                         /label= AAs 19-123 of CS protein
/note= "Region 1 contg. flanking region less
signal sequence"
                   Length 327;
                                   Indels
                                                                                                                                                                                                                                                                              82..97
/label= immunodominant repeat region
/note= "four tetrapeptide repeat units"
                                                            ---EKKIAKMEKASSVFNVVNS 36
                  Score 91; DB 12; Le
Pred. No. 8.2e-05;
3; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                                                     /label= AAs 288-412 of CS protein
/note= "Region II flanking region"
                                                                                                                                                                                                                                                                                                                 'label= synthetic linker
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Hollingdale MR;
                                                                                                                                                                                                                                                                                                                                 /label= artifact
/note= "see comments"
                                                                                                                                                                                                                                                                                                                                                                                                     'note="see comments"
                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                            AAR13178 standard; Protein; 335 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 4; Page 11; 18pp; English.
                                                                                                                                                                                                                                                                                                                                                                                             /label= artifact
                Query Match
Best Local Similarity 55.3%;
Matches 21; Conservative
                                                                                                                                                                                                                  Plasmodium falciparum.
Influenza virus (A/PR/8/34).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  90EP-0313257.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (SMIK ) SMITHKLINE BEECHAM.
                                                                                                                                                        (first entry)
                                                  7 LRPGSSGPSLD-----
                                                                                                                                                                                                                                                                                                                                                  .209
                                                                                                                                                                                                                                                                                                                                                                                                              211..335
                                                                                                                                                (updated)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gordon DM,
                                                                                                                                                                        NS1_81(NANP)4RLfAuth.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 1991-179771/25.
327 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (GROS/) GROSS M S.
                                                                                                                                               25-MAR-2003
29-AUG-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 06-DEC-1990;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   08-DEC-1989;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                EP432965-A
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Sequence
                                                                                                                             AAR13178;
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                                                                                                                                                                                                                                                                                                         Peptide
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the polypeptide is prepd. by genetic engineering of genes encoding the P. falciparum circumsporozoite (CS) protein [Dame et al., Science 225: 593 (1984)], and the influenza virus non-structural protein 1 (NSI), [Baez et al., Nucleic Acids Research, 8: 5845 (1980)]. The DNA encoding the 1st 81 AAs of the N-terminal of NSI (NSI_81) is linked to a synthetic sequence encoding four repeat units from the immunodominant region, which in turn is linked via a synthetic sequence to DNA encoding Region I conty, flanking region less the 18 AA signal region. This is linked to DNA encoding Region II-conty flanking region. The Pro residue separating the Asp (at the C-terminal of the linker) from the Region I conty. CS flanking region is an artifact of a synthetic Foki/TthIII I linker. The regions is an artifact of a synthetic Foki/TthIII I linker. The ceptons is an artifact of a synthetic Foki/TthIII I linker. The See also AAR12306-R1231 and AAR13175-R13179.
                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Immunogenic determinant; circumsporozoite; CS; vaccine; malaria; hybrid; influenza virus; non-structural protein 1; fusion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'note= "Influenza virus nonstructural protein 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      82..97
/label= immunodominant repeat region
/note= "four variant tetrapeptide repeat units"
                                                                                                                                                                                                                                                                                                                                                                                                  8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "Region 1 contg. flanking region less signal sequence"
                                                                                                                                                                                                                                                                                                                                                              Length 335;
                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                       284 IKPGSANKPKDELDYENDIEKKICKMEKCSSVFNVVNS 321
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /label= AAs 288-412 of CS protein
/note= "Region II flanking region"
                                                                                                                                                                                                                                                                                                                                                           Score 91; DB 12; L
Pred. No. 8.5e-05;
3; Mismatches 6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .05.209
| Tabel = AAs 19-123 of CS protein
                                                                                                                                                                                                                                                                                                                                                                                                                                   7 LRPGSSGPSLD-----EKKIAKMEKASSVFNVVNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'label= N-terminal of NS1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        78..103
/label= synthetic linker
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "see comments"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /label= artifact
/note="see comments"
211..335
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAR13179 standard; Protein; 335 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /label= artifact
                                                                                                                                                                                                                                                                                                                                                            49.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Plasmodium falciparum.
Influenza virus (A/PR/8/34).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (updated)
(first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    'note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NS1_81(NVDP)4RLfAuth.
                                                                                                                                                                                                                                                                                                                         335 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25-MAR-2003
29-AUG-1991
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                                                                                                                                                                                                                                                                                                                             Sequence
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29-AUG-1991 (first entry)
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                                                   hybrid;
                                                                                                                                           Peptide
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                                                                                                              Region
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 Ξ,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                  Polypeptide comprising immunogenic determinants from P falciparum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            he complete nucleotide and AA sequences are given in EP-304720,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     8;
                                                 /note= "Region 1 contg. flanking region less
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                / Match 49.7%; Score 91; DB 12; Length 319; Local Similarity 55.3%; Pred. No. 8e-05; nes 21; Conservative 3; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    268 IKPGSANKPKDELDYENDIEKKICKMEKCSSVFNVVNS 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7 LRPGSSGPSLD-----EKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                                                             for vaccine against malaria infection in humans.
                                                                                        /note="see comments"
195..319
Jabel= AAs 288-412 of CS protein
/note= "Region II flanking region
                                      /label= AAs 19-123 of CS protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               See also AAR12306-R12311 and AAR13175-R13179. (Updated on 25-MAR-2003 to correct PA field.)
                                                           signal sequence"
                                                                                                                                                                                                                                                                           Hollingdale MR;
                  "see comments"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAR13177 standard; Protein; 327 AA
                                                                                                                                                                                                                                                                                                                                               Example 2; Page 10; 18pp; English.
         /label= artifact
                                                                               /label= artifact
                                                                                                                                                                                                      89US-0447746.
                                                                                                                                                                                                                                  US SEC OF ARMY.
BIOMEDICAL RES INST.
GROSS M S.
                                                                                                                                                                                  90EP-0313257
                                                                                                                                                                                                                          SMIK ) SMITHKLINE BEECHAM.
                             193
                     'note=
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                                                                                                                                                                                                                                                                           Gross MS, Gordon DM,
                                                                                                                                                                                                                                                                                              WPI; 1991-179771/25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             319 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       iled May 1, 1990
                                                                                                                                                                                  06-DEC-1990;
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                                                                                                                                                              19-JUN-1991
                                                                                                                                         EP432965-A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
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Region
                             Region
                                                                     Region
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Matches
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The polypeptide is prepd. by genetic engineering of genes encoding the P. falciparum circumsporozoite (CS) protein [Dame et al., protein = 255 : 593 (1984)], and the influenza wirus non-structural protein I (NSI), [Baez et al., Nucleic Adids Research, 8 : 5845 (1980)]. The DNA encoding the 1st 81 AAS of the N-terminal of NSI (NSI_81) is linked via a synthetic sequence to DNA encoding Region I conty. flanking region less the 18 AA signal region. This is linked to a synthetic sequence encoding two repeat units from the immunodominant region, which in turn is fused to DNA encoding Region Ir-conty. flanking region. The Pro residue Separating the C flanking region is an artifact of a filled-in BamHi site; the Gly separating the repeat units and the Region Ir-conty. C flanking region is an artifact of a synthetic FokI/TthIII I linker. The region is an artifact of a synthetic FokI/TthIII I linker. The See also AAR12306-RL231 and ARR13175-RL31179.

(Updated on 25-MAR-2003 to correct PA field.)
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                                                              Inmunogenic determinant; circumsporozoite; CS; vaccine; malaria; nybrid; influenza virus; non-structural protein 1; fusion.
                                                                                                                                                                                                                                                                                                                                                                                        /note= "Influenza virus nonstructural protein 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /label= AAs 19-123 of CS protein
/note= "Region 1 contg. flanking region less
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /label= immunodominant repeat region
/note= "two tetrapeptide repeat units"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /label= AAs 288-412 of CS protein
/note= "Region II flanking region"
                                                                                                                                                                                                                                                                                                                      1..81
/label= N-terminal of NS1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              signal sequence"
                                                                                                                                                                                                                                                                                                                                                                                                                         32..87
/label= synthetic linker
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hollingdale MR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       note= "see comments"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note="see comments"
                                                                                                                                                                                                                                                                                 Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /label= artifact
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /label= artifact
                                                                                                                                                                           Plasmodium falciparum.
Influenza virus (A/PR/8/34/).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US SEC OF ARMY.
BIOMEDICAL RES INST
NS1_81-RLfAuth + (NANP)2.
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Plasmodium falciparum.
                                                                                                                                                                                                                    Gross MS, Young JF;
                                                                                                                                                                                                                                      WPI; 1990-350299/47.
N-PSDB; AAQ06580.
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                                                                                                                                                                                                                                                                                                                                                                                       Sequence 319 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NS1_81-RLfAuth.
                                                                                                                                                 01-MAY-1990;
                                                                                                                                                                    03-MAY-1989;
                                                                                                                              22-NOV-1990
                                                                                                          EP398540-A
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                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
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                     Key
Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Key
Region
                                                           Domain
                                                                               Domain
                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
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  δλ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                         The polypeptide is prepd. by genetic engineering of genes encoding the P. falciparum circumsporozoite (CS) protein [Dame et al., science 225 : 593 (1984)], and the influenza virus non-structural protein I (NSI). [Baez et al., Nucleic Acids Research, 8 : 5845 (1980)]. The DNA encoding the 1st 81 AAs of the N-terminal of NSI (NSI_81) in linked via a synthetic sequence to DNA encoding Region I contg. flanking regionless the 18 AAs ignal region, which in turn is fused to DNA encoding Region II-contg. flanking regionless the first nine N-terminal AAs. This CS fusion is designated RLideltag. The Pro residue separating the Asp (at the C-terminal fithellinker) from Richeltag is an artifact of a filled in BamHI site. The peptide can be used in a vaccine for protection against
                                                                                                                                                                                                                                                                             Polypeptide comprising immunogenic determinants from P falciparum
                                                                 /label= AAs 297-412 of CS protein
/note= "Region II flanking region minus 9 N-term-
inal AAs"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ω
ω
                            /label= AAs 19-123 of CS protein
/note= "Region 1 contg. flanking region less
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 309;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       49.7%; Score 91; DB 12; Length 30
55.3%; Pred. No. 7.7e-05;
live 3; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         7 LRPGSSGPSLD-----EKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                       for vaccine against malaria infection in humans.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        See also AAR12306-R12311 and AAR13176-R13179. (Updated on 25-MAR-2003 to correct PA field.)
                                                signal sequence"
                                                                                                                                                                                                                                      Hollingdale MR;
 /label= artifact
/note= "see comments"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAR07945 standard; protein; 319 AA
                                                                                                                                                                                                                                                                                                         Example 1; Page 7; 18pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NS181RLFAuth plasmid product.
                                                                                                                                                90EP-0313257.
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BIOMEDICAL RES INST
                                                                                                                                                                                      SMIK ) SMITHKLINE BEECHAM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (updated)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity 55.3
les 21; Conservative
                                                         194..309
                                                                                                                                                                                                                                      Gordon DM,
                                                                                                                                                                                                                                                         WPI; 1991-179771/25
                                                                                                                                                                                                                  GROS/) GROSS M S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    309 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Malaria; vaccine
                                                                                                                                                                  08-DEC-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       25-MAR-2003
22-FEB-1991
                                                                                                                             19-JUN-1991
                                                                                                          EP432965-A
                                                                                                                                                                                                                                      Gross MS,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sednence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAR07945;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                              malaria.
                                                                                                                                                                                              (USSA )
                    Region
                                                          Region
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Matches
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Gaps
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/label= N-terminal of NS1
/note= "Influenza virus nonstructural protein 1"
82..87
/label= synthetic linker
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Immunogenic determinant; circumsporozoite; CS; vaccine; malaria;
hybrid; influenza virus; non-structural protein 1; fusion.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New polypeptide used in malaria vaccine - comprises immunogenic determinants from 1st and 2nd flanking regions of plasmodium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          8;
                     1.81
/label= NS181 protein fragment
/note= "from plasmid pMG-1"
89.193
/label= Fragment of circumsporozite protein
                                                                                                                                                         204..319
/label- Fragment of circumsporozite protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 91; DB 11; Length 319;
Pred. No. 8e-05;
3; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      268 IKPGSANKPKDELDYENDIEKKICKMEKCSSVFNVVNS 305
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7 LRPGSSGPSLD-----EKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 surface protein and intermediate repeat domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (Updated on 25-MAR-2003 to correct PA field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 2; Page 11-12; 24pp; English.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAR13176 standard; Protein; 319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ch 49.7%;
1 Similarity 55.3%;
21; Conservative 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plasmodium falciparum.
Influenza virus (A/PR/8/34).
                                                                                                                                                                                                                                                                                                                                                90EP-0304720
                                                                                                                                                                                                                                                                                                                                                                                                 89US-0346863
                                                                                                                                                                                                                                                                                                                                                                                                                                                  (SMIK ) SMITHKLINE BEECHAM (GROS/) GROSS M S.
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29-AUG-1991 (first en
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antibodies against gonadotropin releasing hormone (GRBH also known as luteinising mormone releasing hormone (GRBH also known saluteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GRRH antibody titres. The present sequence is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                                                                                                                                                             Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Immunogenic determinant; circumsporozoite; CS; vaccine; malaria; hybrid; influenza virus; non-structural protein 1; fusion.
/note= "Gonadotrophin releasing hormone epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "Influenza virus nonstructural protein 1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1.4e-06;
nes 0; Indels
                                           /note= "Amidated glycine or glycinamide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 95; DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       100.0%; Prec. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /label= N-terminal of NS1
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/label= synthetic linker
88
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 11; Page 8; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Plasmodium falciparum.
Influenza virus (A/PR/8/34/).
                                                                                                                                                                      04-MAY-2001; 2001WO-US14363.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            51.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local Similarity 100.
nes 20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                epitope or its analogue
                                                                                                                                                                                                                                                                                               Michaeli D,
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                                                                                                                                                                                                                                                                                                                                      WPI; 2002-049440/06.
                                                                                                                                                                                                                                                        (APHT-) APHTON CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   33 AA;
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                                                                                    WO200185763-A2
                       Modified-site
                                                                                                                                                                                                             05-MAY-2000;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           25-MAR-2003
                                                                                                                             15-NOV-2001
                                                                                                                                                                                                                                                                                               Grimes S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
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Region
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    δ
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0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antibodies against gonadotropin releasing hormone (GRRH also known as luteinising hormone releasing hormone. LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GRRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GRRH antibody titres. The present sequence is a peptide from circumsponsocite protein, CSP, a promiscuous helper T-cell peptide epitope used in the immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 luteinising hormone releasing hormone; LäRH; contraceptive; promiscuous helper T-cell peptide epitope; immunomimic peptide epitope; breast cancer; uterine cancer; gynaecological cancer; endometriosis; uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                                                                                                Novel synthetic immunogen for inducing immune response against gonadotrophi releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Malaria CSP protein (378-398 aa)"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             51.9%; Score 95; DB 23; L
100.0%; Pred. No. 7.9e-07;
ilve 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Spacer peptide"
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                                                                                                                                                                                                                                                                                                                                                                                                                        Disclosure; Page 28; 43pp; English.
                                                                                                                                                                                                                                  Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAU11423 standard; peptide; 33 AA
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Chimeric - Mammalia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic immunogen peptide 4.
                                                                                                     04-MAY-2001; 2001WO-US14363.
                                                                                                                                              05-MAY-2000; 2000US-202328P
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21..24
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25..33
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                                                                                                                                                                                         (APHT-) APHTON CORP
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Best Local Similarity
Matches 20; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        20 AA;
                     WO200185763-A2.
                                                            15-NOV-2001
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QY g ó

Gaps

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17..36
/note-
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Best Local Similarity
Matches 35; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            · 51 AA;
                                                                                                        WO200185763-A2
                                                                         Modified-site
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                                                                                                                               15-NOV-2001
                                                                                                                                                                                                                 Grimes S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAU11414;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                     Peptide
                                           Peptide
   Peptide
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                                                                                                                                                                                                                                            peptide which comprises a promise could be per reel peptide epitope and immunominic peptide epitope or its analogue. The synthetic immunominic peptide epitope or its analogue. The synthetic immunomen is useful inducting an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other hyparecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody fittres. The present sequence is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           luteinising hormone releasing hormone; LHRH; contraceptive; promiscuous helper T-cell peptide epitope; immunomimic peptide epitope; breast cancer; uterine cancer; gynaecological cancer; endometriosis; uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                               The invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                         antibodies against gonadotropin releasing hormone (GnRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /label= OTHER
/note= "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'note= "Gonadotrophin releasing hormone epitope
                                                                                                                                     synthetic immunogen for inducing immune response against
                                                                                                                                                                                                                                                                                                                                                                                                  ő
                                                                                                                                                                                                                                                                                                                                                                             Length 36;
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                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                        ; Score 182; DB 23; Le
~~d. No. 3.1e-19;
                                                                                                                                                                                                                                                                                                                                                                                                                       36
                                                                                                                                                                                                                                                                                                                                                                                                                                2 HWSYGLRPGSSGPSLDEKKIAKMEKASSVFNVVNS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Location/Qualifiers
                                                                                              Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AA
                                                                                                                                                                                                                                                                                                                                                                    99.5%; Sc.
100.0%; Pre
                                                                                                                                                                                          Claim 11; Page 10; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chimeric - Plasmodium falciparum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic immunogen peptide 12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (1..10 aa)"
11..16 /note= "Space
                               04-MAY-2001; 2001WO-US14363.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAU11431 standard; peptide;
                                                   05-MAY-2000; 2000US-202328P
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                                                                                                                                                                       epitope or its analoque
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                                                                                             Michaeli D,
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                                                                        (APHT-) APHTON CORP
                                                                                                                WPI; 2002-049440/06
                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
Les 35; Conserv
                                                                                                                                                                                                                                                                                                                                                       36 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Misc-difference
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          15-NOV-2001
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                                                                                              Grimes S,
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                                                                                                                                      Novel
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antibodies against group of a princip instance of the state of the sta
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue -
                                                                                                                                                         43..51 / Gonadotrophin releasing hormone epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
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"Malaria CSP protein (378-398 aa)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                      /note= "Amidated glycine or glycinamide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   P. falciparum circumsporozoite protein, CSP, peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. 4.7e-19;
Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 182; DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 HWSYGLRPGSSGPSLDEKKIAKMEKASSVFNVVNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 HWSYGLRPGSSGPSLDEKKIAKMEKASSVFNVVNS
                                                                                                "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 11; Page 12-13; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AA
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100.0%; Pic
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-MAY-2001; 2001WO-US14363.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-MAY-2000; 2000US-202328P.
                                                                                                                                                                                                                  (2-10 aa)"
51
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                   37..42
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Michaeli D,
                                                                                                           /note=
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September 24, 2003, 16:58:36; Search time 40.687 Seconds (without alignments) 140.442 Million cell updates/sec
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2. (SIDSI)godata/geneseqy/geneseqp-embl/AA1981.DAT:*
3. (SIDSI)godata/geneseqy/geneseqp-embl/AA1981.DAT:*
4. (SIDSI)godata/geneseqy/geneseqp-embl/AA1982.DAT:*
5. (SIDSI)godata/geneseqy/geneseqp-embl/AA1982.DAT:*
6. (SIDSI)godata/geneseqy/geneseqp-embl/AA1985.DAT:*
7. (SIDSI)godata/geneseqy/geneseqp-embl/AA1986.DAT:*
8. (SIDSI)godata/geneseqy/geneseqp-embl/AA1989.DAT:*
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9. (SIDSI)godata/geneseqy/geneseqp-embl/AA1989.DAT:*
9. (SIDSI)godata/geneseqy/geneseqp-embl/AA1999.DAT:*
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       183
1 XHWSYGLRPGSSGPSLDEKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  . 1107863 segs, 158726573 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                                                                                                                                   OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BLOSUM62
Gapop 10.0 , Gapext 0.5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Minimum DB seq length: 0
Maximum DB seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   US-09-848-834A-16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Scoring table:
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                                                                                                                                                                                                                                                                                                Run on:
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	Synthetic immunoge	Synthetic immunode	P, falciparum circ	Synthetic immunode	NS1 81-RLfdelta9.	NS181RLFAuth plasm	NS1 81-RLfAuth. P	NSI 81-RLfAuth + (NS1_81(NANP)4RLfAu
SUMMARIES	ID	AAU11427	AAU11431	AAU11414	AAU11423	AAR13175	AAR07945	AAR13176	AAR13177	AAR13178
	DB	23	23	23	23	12	11	12	12	12
	Query Match Length DB	36	51	20	33	309	319	319	327	335
dФ	Query	99.5	99.5	51.9	51.9	49.7	49.7	49.7	49.7	49.7
	Score	182	182	95	95	91	91	91	91	91
	Result No.	7	2	m	4	ഗ	9	7	00	6

NS1_81 (NVDP) 4RLfAu	0	£п	0,	'n.	Peptide comprising	A peptide which ma	Vaccine related MH	Sequence of modifi	Plasmodium falcipa	Malaria circumspor	P. falciparum CS p	Malaria circumspor	Circumsporozoite h	T-cell stimulatory	leri	n deriv	T helper cell (Th)	ie		Plasmodium falcipa				Sequence of T help	Plasmodium falcipa		falciparum	P falciparum circu	Loosely MHC-restri	158P1D7 related HL	Malaria circumspor	P. falciparum circ	P. falciparum circ		Plasmodium falcipa
	AAP83144	AAP60416	AAR37796	AAR37797	AAG63663	AAG63516	AAM98951	AAP91504	AAR82586	AAR78920	AAR75955	AAR70912	AAW05612	AAW35440	AAY23252	AAY80071	AAY54553	AAY58777	AAB99706	AAG62428	AAG84517	AAG88269	AAG89366	AAB84447	AAB98457	ABJ16181	ABJ11372	578	ABB78050	ABJ01952	ABP51501	ABG34858		53	ABB94469
12	ע	7	14	14	22	22	22	10	16	16	16	16	17	18	20	21	21	21	22	22	22	22	22	22	22	23	23	23	23	23	23	23	23	23	23
335	411	412	424	424	33	33	19	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21	21
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10	TT	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

AAU11427 standard; peptide; 36 AA.

(first entry)

12-MAR-2002

AAU11427;

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luteinising hormone releasing hormone; LHRH; contraceptive; promiscuous helper r-cell peptide epitope; immunominic peptide epitope; breast cancer; uterine cancer; gynaecological cancer; endometriosis; uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                           "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                           /note= "Other= Pyro-glutamic acid or 5-oxo prolin
1..10
/note= "Gonadotrophin releasing hormone epitope"
                                                                                                        Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
                                                                                                                                                                                                                                                                                                              11..16
/note= "Spacer peptide"
17..36
/note= "Malaria CSP protein (378-398 aa)"
                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                  Chimeric - Plasmodium falciparum Chimeric - Mammalia.
                                                                              ω
ω
                                                                                                                                                                                                                                                              /label= OTHER
                                                                             Synthetic immunogen peptide
                                                                                                                                                                                                                                                  Misc-difference
                                                                                                                                                                                                                                                                                                                                                                               WO200185763-A2
                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                       Peptide
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DR Pfam; PF01471; PG_binding_1; 1.

KW Hypothetical protein; Complete proteome.

SQ SEQUENCE 208 AA; 22555 MW; 4A80017011CE3434 CRC64;

Query Match

Best Local Similarity 42.9%; Pred. No. 23;

Matches 9; Conservative 5; Mismatches 7; Indels 0; Gaps 0;

Qy 7 LRPGSGGPSLQXIKANSKFIG 27

|:|| | | :| : | ::|

Db 52 LKPGSGGPDVQTLQTCQLKQLG 72
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Search completed: September 24, 2003, 17:47:20 Job time : $31.0554\ \mathrm{secs}$

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27
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                                                                                                                                                                                                                                                                                                                         PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                           Q8UW80;
                                Q8UW80
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      08YR98
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            RESULT 14
                       Q8UW80
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                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                      Oreochromis niloticus (Nile tilapia) (Tilapia nilotica).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Labroidei;
Cichlidae; Oreochromis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei; Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A. Farahmand H.A., Sohm F., Hwang G.-L., Maclean N.; "Isolation and Expression of Tilapia (Oreochromis niloticus) Serine
                                                                                                                                                                                                                                                                   ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ;
                                                                                    Submitted (FEB-1998) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GONADOTROPIN-RELEASING HORMONE. GNRH-ASSOCIATED PEPTIDE.
                                                                                                                                                                                                                                            Score 52; DB 13; Length 87;
Pred. No. 6.3;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 13; Length 94;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Type GnRH Coding and Regulatory Sequences.";
Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases.
EMBL; A4467291; AAM90220.1;
InterPro; IPR002012; GnRH.
InterPro: IPR004079; GonadoliberinI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E57DBA832FC078D7 CRC64;
                                                                                                                                                                                                                         0D2463533D96782A CRC64;
                                                                                                                                                                                                                                                                                                                                                                                   01-OCT-2002 (TrEMBLrel. 22, Created)
U-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
GRRH1 preprohormone precursor.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 52; DB 13
Pred. No. 6.9;
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                94 AA.
                                                                                                                -1- SIMILARITY: BELONGS TO THE GNRH FAMILY.
EMBL: AF046801, AAD02427.1; -.
InterPro; IPR002012; GnRH.
InterPro; IPR004079; Gonadoliberini.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                        Pfam; PF00446; GRRH; 1.
PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRINTS; PR01541; GONADOLIBRNI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1 22 P
23 32 G
36 94 G
94 AA; 10396 MW;
                                                                                                                                                                                                                        87 AA; 9871 MW;
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88.9%;
                                                                                                                                                                                                                                            h 32.1%;
Similarity 88.9%;
8; Conservative
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                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS00473; GNRH;
                                                                                                                                                                                                                                                                                      HWSYGLRPG 10
                                                                                                                                                                                                                                                                                                           HWSYGLSPG 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 HWSYGLRPG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24 HWSYGLSPG 32
                                                                                                                                                                                         Amidation; Hormone.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pfam; PF00446; GnRH
                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                   SEQUENCE FROM N.A.
                      Sparus
                                                                                                         SIMILARITY).
                              NCBI_TaxID=8175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NCBI_TaxID=8128
                                                               TISSUE=Ovary;
                                                                       Nabissi M.;
                                                                                                                                                                                                              NON_TER
SEQUENCE
                     Sparidae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
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                                                                                                                                                                                                   NON_TER
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Matches
                                                                                                                                                                                                                                                                                                                                                                                                                               GNRH1
                                                                                                                                                                                                                                                                                                                                           RESULT 13
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QQ
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                       01-MAR-2003 (TrEMBLrel. 20, Last sequence update)
Seabream-type gonadotropin-releasing hormone precursor (Gonadoliberin)
(GnRH) (LH-RH) (Luliberin).
Verasper moseri (Barfin flounder).
Ekraryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Pleuronectoidei; Pleuronectidae; Verasper.
NCBL_TaxID-98923;
                                                                                                                                                                                                                                                                                                           'Molecular cloning of three cDNAs encoding GnRH in the brain of barfin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GONADOTROPIN-RELEASING HORMONE ASSOCIATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEABREAM-TYPE GONADOTROPIN-RELEASING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Kanekor T., Nakamura Y., Wolk C.P., Kuritz T., Sasamoto S., Watanabe A., Iriguchi M., Ishikawa A., Kawashima K., Kimura T., Kishida Y., Kohara M., Matsumoto M., Matsuno A., Muraki A., Nakazaki N., Shimpo S., Sugimoto M., Takazawa M., Yamada M., Yasuda M., Tabata S.; Complete genomic sequence of the filamentous nitrogen-fixing cyanobacterium Anabaena sp. strain PCC 7120."; EMBL: AP003593; BaB7249.1; -. InterPro; IPR002477; PG_binding.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                         flounder.";
Submitted (JUL-2001) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS (BY SIMILARITY).
-!- SIMILARITY: BELONGS TO THE GNRH FAMILY.
EMBL. AB066360; BAB83984.1;
-InterPro; IPR002012; GRRH.
InterPro; IPR004079; GonadoliberinI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 52; DB 13; Length 96;
Pred. No. 7;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Anabaena sp. (strain PCC 7120).
Bacteria; Cyanobacteria; Nostocales; Nostocaceae; Nostoc.
NCBL_TaxID=103690;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FA3202565EA00DCC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               QBYR98;
01-MAR-2002 (TrEMBLrel. 20, Created)
01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
Hypothetical protein All3550.
96 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             208 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HORMONE.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PR01541; GONADOLIBRNI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             96 AA; 10560 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 32.1%;
88.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Amidation; Hormone; Signal. SIGNAL 1 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00446; GnRH; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 11111 | 1
28 HWSYGLSPG 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           2 HWSYGLRPG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A. Amano M.;
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SEQUENCE FROM N.A.
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NCBI_TaxID-8177;
                                                                                                                        64
    Kato M.,
                                                                                                                                    SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                         Query Match
                                                                                                             NON_TER
                                                                                                                                                                                                                                                                                           Q8JIF4;
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                                                                                                                                                                     Best Loc
Matches
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Pagrus major (Red sea bream) (Chrysophrys major).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Buteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidei;
                                                                                                                                                                                                                                                                                                   Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygil; Neopterygil; Teleostel; Euteleostel; Neoteleostel;
Acanthomorpha; Acanthopterygil; Percomorpha; Perciformes; Percoidel;
Sparidae; Dentex.
                                                                                                                                                                                                                                                                                                                                                                            Kato M., Elmesiry G.E.;
"Sequence comparison of GnRH genes in closely-related Sparidae
fishes.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ò
                                                                                                                        Ϊ;
                                                                                                 Length 437;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 52; DB 13; Length 64; Pred. No. 4.5;
                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                             Submitted (AUG-2002) to the EMBL/GenBank/DDBJ databases. EMBL; AB089313; BAC07229.1; -. InterPro; IPR002012; GNRH. InterPro; IRR004079; GonadoliberinI. PF00446; GNRH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1; Indels
                                                                           437 AA; 47945 MW; AB012AC43DA9A813 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               64 AA; 7028 MW; 1F91FFFB2B4BB6D0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-07T-2002 (TrEMBLrel. 22, Created)
01-0CT-2002 (TrEMBLrel. 22, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                           01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                 DB 16;
                                                                                                                       8;
                                                                                                                                                                                                                        64 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            64 AA.
                                                                                                Query Match 32.4%; Score 52.5; Dest Local Similarity 50.0%; Pred. No. 32; Matches 13; Conservative 4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0; Mismatches
                                                                                                                                                                                                                                                                               Gonadotropin-releasing hormone (Fragment).
EMBL; AP003190; BAB81077.1; -.
InterPro; IPR000175; Na/ntran_symport.
Pfam; PF00209; SNF; 1.
PRINTS; PR00176; NANBUSMPORT.
ProDom; PD000448; Na/ntran_symport; 1.
ProSITE; PS55267; NA_NEUROTRAN_SYMP_3; 1.
Complete proteome.
437 AA; 47945 WW; AB012AC43DF
                                                                                                                                                          273 FAYGLNP-SSGPSLLFITLPKIFQGM 297
                                                                                                                                            3 WSYGLRPGSSGPSLQYIKANSKFIGI 28
                                                                                                                                                                                                                         PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
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88.98;
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Matches 8; Conservative
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                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 HWSYGLRPG 10
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SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=94951;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sparidae; Pagrus
                                                                                                                                                                                                                                                                                          Dentex dentex.
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NON_TER
SEQUENCE
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                                                                                                                                                                                                                        Q8JIF3
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Q8JIF2
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01-0CT-2002 (TrEMBLrel. 22, Last sequence update)
01-0CT-2002 (TrEMBLrel. 23, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
60nadotropin releasing hormone (Fragment).
Acanthopagrus latus (Yellowfin porgy).
Bukaryota; Metazoa: Chordata; Craniata; Vertebrata; Buteleostomi;
Actinopterygii; Meopterygii; Teleostei; Buteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Teleostei; Percomorpha; Perciformes; Percoidel;
Spariaciae; Acanthopagrus.
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01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
SbGnRH (Gonadoliberin) (Gonadotropin-releasing hormone) (LH-RH)
(Luliberin) (Fragment).
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Kato M., Elmesiry G.E.;
"Sequence comparison of GnRH genes in closely-related Sparidae
fishes.";
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0
(ato M., Elmesiry G.E.;
'Sequence comparison of GnRH genes in closely-related Sparidae
                                                                                                                                                                                                                                                                                                                                                    Score 52; DB 13; Length 64; Pred. No. 4.5; 0; Mismatches 1; Indels
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                                                                    Submitted (AUG-2002) to the EMBL/GenBank/DDBJ databases.
EMBL; AB089314; BAC07230.1; -.
InterPro; IPR002012; GNRH.
InterPro; IPR004079; GonadoliberinI.
Pfam; PF00446; GNRH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Submitted (AUG-2002) to the EMBL/GenBank/DDBJ databases.
EMBL, AB089312; BAC07238.1; -.
InterPro: IPR002012; GRRH.
InterPro: IPR004079; GonadoliberinI.
                                                                                                                                                                                                                                                                                                    119F0D0CD14BB6D0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          067708609FE8E771 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
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PROSITE; PS00473; GNRH; 1.
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PROSITE; PS00473; GNRH; 1.
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88.9%;
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88.9%;
                                                                                                                                                                                                                                                                                                  64 AA; 6967 MW;
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nes 8; Conservative
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Matches 8; Conservative
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ABDINE-2222988; PubMed=12200547;
MEDLINE-2222988; PubMed=12200547;
MEDLINE-2222988; PubMed=12200547;
Messels M.R., Paulsen I.T., Nelson K.E., Margarit I., Read T.D.,
Madoff L.C., Wolf A.M., Beanan M.J., Brinkac L.M., Daugherty S.C.,
DeBoy R.T., Durkin A.S., Kolonay J.F., Madupu R., Lewiß M.R.,
Radune D., Fedorova N.B., Scanlan D., Khouri H., Mulligan S.,
Carty H.A., Cline R.T., Van Aken S.E., Gill J., Scarselli M., Mora M.,
Iacobhin E.T., Brettoni C., Galli G., Marlani M., Vegni F., Maione D.,
Rinaudo D., Rappuoli R., Telford J.L., Kasper D.L., Grandi G.,
                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
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Shiba T., Ogasawara N., Hattori M., Kuhara S., Hayashi H.;
"Complete genome sequence of Clostridium perfringens, an anaerobic
flesh-eater.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Clostridium perfringens.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Complete genome sequence and comparative genomic analysis of ar emerging human pathogen, serotype V Streptococcus agalactiae."; Proc. Natl. Acad. Sci. U.S.A. 99:12391-12396(2002).
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                          Indels
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                                                                                                                                                                                                                                                                                                                                                                                            Streptococcus agalactiae (serotype V).
Bacteria; Firmicutes; Lactobacillales; Streptococcaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         214 AA; 24470 MW; 7EE27E7BDE946854 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-MAR-2002 (TrEMBLrel. 20, Last sequence update) 01-MAR-2003 (TrEMBLrel. 23, Last annotation update) Probable sodium-and chloride-dependent transporter.
                                                                                                                                                                                                                                                                                                  01-MAR-2003 (TrEMBLrel. 23, Last sequence update) 01-MAR-2003 (TrEMBLrel. 23, Last annotation update) Hydrolase, haloacid dehalogenase-like family.
                       11;
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                                                                                                               96 HWLHOHGYRLAVASSSPMVD-IKRNLKELGVTE 127
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 HW----SYGLRPGSSGPSLQYIKANSKFIGITE 30
                                                                                                                                                                                                                                  214 AA.
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                       3; Mismatches
                                                                    HW----SYGLRPGSSGPSLQYIKANSKFIGITE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ch 32.4%; Score 52.5; Similarity 42.4%; Pred. No. 1414; Conservative 3; Mismatche
                                                                                                                                                                                                                                                                               Created)
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                                                                                                                                                                                                                                  PRT;
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42.48;
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                       14; Conservative
                                                                                                                                                                                                                                  PRELIMINARY;
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PubMed=11792842;
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=216466;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Complete proteome. SEQUENCE 214 AA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SAG0181;
                                                                                                                                                                                                                                                                                                                                                                                                                                         Streptococcus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Clostridium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            96
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                         SAG0181.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Q8XKM3;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TIGE;
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                       Matches
                                                                                                                                                                                    RESULT 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 8
                                                                                                                                                                                                            Q8E219
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Q8XKM3
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STRAIN-NEM316 / Serctype III;
MEDLINE-2224508; PubMed-12354221;
Glaser P., Rusniok C., Buchrieser C., Chevalier F., Frangeul L.,
Msadek T., Zouine M., Couve E., Lalioul L., Poyart C., Trieu-Cuot P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Archaea; Euryarchaeota; Thermococci; Thermococcales; Thermococcaceae; Pyrococcus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            'Genome sequence of Streptococcus agalactiae, a pathogen causing
                                                                  ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
                     Length 374;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32.4%; Score 52.5; DB 16; Length 214;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.

SEQUENCE FROM N.A.

STRAIN-VC1 / DSM 3638 / ATCC 43587 / JCM 8422;

Weiss R.B., Dunn D.M., Robb F.T., Brown J.R.;

"The complete sequence of the Pyrococcus furiosus genome.";

"The complete sequence of the EMBL/GenBank/DDBJ databases.

EMBL, ADL0283, AAL02009.1; -.

InterPro; IPR001296; Glyco_trans_1.

Pfam; PP00534; Glycos_transf_1; 1.

Pram; Pr00534; Glycos_transf_1; 1.

Transferass; Complete proteome.

Prominure 358 AA; 40003 MW; 4DIFAA206B9F8A3C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            DB 17; Length 358;
                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Streptococcus agalactiae (serotype III).
Bacteria; Firmicutes; Lactobacillales; Streptococcaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Complete proteome.
4470 MW; 7EE27E7BDE946854 CRC64;
                                                                                                                                                                                                                                                                                                                                               Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                       DB 16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               214 AA.
                                                                                                                                                                                                                                                                            358 AA
                13.0%; Score 53.5; Dilarity 44.8%; Pred. No. 19; Conservative 5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. 22;
                                                                                                               2 HWSYGLRPGSSGPSLQYIKANSKFIGITE 30
                                                                                                                                         ||||||:|| | :|| ||-||:|| HWSYGIRE-SFAVNLIEIEADDGTVGIGE 48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 53;
Pred. No.
                                                                                                                                                                                                                                                                                                                          Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 invasive neonatal disease.";
Mol. Microbiol. 45:1499-1513(2002).
EMBL; AL766844; CAD45824.1;
                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          214 SGEMLPFLKAQAKFLGIEE 232
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  12 SGPSLQYIKANSKFIGITE 30
                                                                                                                                                                                                                                                                                                           01-JUN-2002 (TrEMBLrel. 21, C: 01-JUN-2002 (TrEMBLrel. 21, Lid 01-MAR-2003 (TrEMBLrel. 23, Lid Glycosyl transferase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              11 protein; Complete
214 AA; 24470 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32.7%;
52.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 32.79
Best Local Similarity 52.65
Matches 10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRELIMINARY;
                                                                                                                                                                                                                                                                            PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hypothetical protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                         Pyrococcus furiosus
                                          Best Local Similarity
Matches 13; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Streptococcus.
NCBL_TaxID=216495;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=2261;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Hypothetical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Kunst F.;
                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
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                                                                                                                                                                                                                                                                          Q8TZU8
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                                                                                                                                                                                                                          RESULT 5
Q8TZU8
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Q8E7H5
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Sest Local Similarity
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                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
        NCBI_TaxID=7937;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=382;
                                                                                   TISSUE-Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
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Actinopterygii; Neopterygii; Teleostei; Anguilliformes; Anguillidae;
Anguilla.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Cloning and characterization of cDNAs encoding the GNRH1 and GNRH2 precursors from bullfrog (Rana catesbelana).";
J. Exp. Zool. 289:190-201(2001).
-I- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GNETATION OF THE TOTAL OF THE T
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01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Progonadoliberin I precursor (Contains: Gonadoliberin I (LHRH I)
(Lutelnizing hormone releasing hormone I) (Gonadotropin releasing hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I
                                                                                                                                                                                                                                                                                                                Rana catesbeiana (Bull frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; Ranidae; Rana
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRINTS; PROJATE, CONADOLIBRAI.

PROSITE; PSO0473; GONADOLIBRAI.

Cleavage on pair of basic residues; Hormone; Amidation; Signal;

Pyrrolidone carboxylic acid.

SIGNAL

CHAIN

25

90

PROGONADOLIBERIN I.

PEPTIDE

25

34

GONADOLIBERIN I.

PEPTIDE

26

GONADOLIBERIN I.

PEPTIDE

27

GONADOLIBERIN I.

PEPTIDE

28

38

38

38

30

GONADOLIBERIN I.

PEPTIDE

CONADOLIMERIN I.

CONADOLIMERIN I.

CONADOLIMERIN I.

PEPTIDE

CONADOLIMERIN I.

CONADO
                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A., TISSUE SPECIFICITY, AND DEVELOPMENTAL STAGE.
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-07-2002 (TrEMBLrel. 22, Last annotation update)
Prepro-mGnH precursor (Gonadoliberin) (Gonadotropin-releasing hormone) (LH-RH) (Luliberin)
Anguilla japonica (Japanese eel).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE-21102951; PubMed=11170016;
Wang L., Yoo M.S., Kang H.M., IM W.B., Choi H.S., Bogerd J.,
Kwon H.B.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 59.5; DB 13; Length 90; Pred. No. 0.52;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 HWSYGLRPGSSG--PSLQ--YIKANSKFIGITEL 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26 HWSYGLRPGGRREVESLQESYAEVPNE-VSFTEL 58
                                                    90 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  91 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4; Mismatches
                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
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Best Local Similarity 47.1
Matches 16; Conservative
                                                       PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRELIMINARY;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-Forebrain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=8400;
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                                                                                                                                                                                                                                                                                          OR GNRH.
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RESULT 2
Q90Y63
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MEDLINE-2136550; PubMed=11481432;

MEDLINE-2136550; PubMed=11481432;

MEDLINE-2136550; PubMed=11481432;

Ma Barnott M.J. Fisher R.F., Jones T., Komp C., Abola A.P.,

Barloy-Hubler F., Bower L., Capela D., Galibert F., Gouzy J.,

Marjal M., Hong A., Hulzar L., Hyman R.W., Kahn D., Kahn M.L.,

Kalman S., Keating D.H., Palm C., Peck M.C., Surzycki R., Wells D.H.,

Ralman S., Keating D.H., Pederspiel N.A., Long S.R.;

"Nucleotide sequence and predicted functions of the entire

Sinorhizoblum meliloti psymA megaplasmid.";

Proc. Natl. Acad. Sci. U.S.A. 98:9883-9888(2001).

Rambl. AEO7266; ARK65455.1;

RITEPTO; IPRO01354; MR_MLE.

PERMI: PF01188; MR_MLE.

PERMI: PF01188; MR_MLE.

PERMI: PS00909; MR_MLE_2: 1.

RESOURCE 374 AA; 40999 MW; 0369A867790B23D6 CRC64;
                   "Expression of two gonadotropin-releasing hormone (GnRH) precursor genes in various tissues of the Japanese eel and evolution of GnRH."; Zool. Sci. 16:471-478(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                Okubo K., Suetake H., Aida K.;
"A splicing variant for the prepro-mammallan gonadotropin-releasing hormone (prepro-mGnRH) mRNA is present in the brain and various peripheral tissues of the Japanese eel.";
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Bacteria; Proteobacteria; Alphaproteobacteria; Rhizobiales;
Rhizobiaceae; Sinorhizobium.
                                                                                                                                                                                                                                                                                                                                          (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 59; DB 13; Length 91; Pred. No. 0.63;
                                                                                                                                                                                                                                                                                                   ZOOI SCI. 16:45-651(1999).
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS SIMILARITY: BELONGS TO THE GNRH FAMILY.
-!- SIMILARITY: BELONGS TO THE GNRH FAMILY.
EMBL, AB026989; BAA83508.1; -.
EMBL, AB026991; BAA83571; -.
InterPro; IPR002012; GNRH.
InterPro; IPR004079; Gonadoliberini.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BA15C9DC08434A7B CRC64;
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01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-DAR-2003 (TrEMBLrel. 23, Last annotation update)
Putative muconate cycloisomerase (EC 5.5.1.1).
RA0797 OR SMA1461.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            pfam; pF00446; GnRH; 1.
PRINTS; PROL541; GONADOLIBRNI.
PROSTIE; PS00473; GNRH.
Amidation; Hormone; Signal.
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Okubo K., Suetake H., Aida K.;
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September 24, 2003, 17:29:11; Search time 30.0554 Seconds (without alignments) 266.163 Million cell updates/sec
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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162
1 XHWSYGLRPGSSGPSLQYIKANSKFIGITEL
                                                                                                                                                                                                                                                                                                                                                                                                           hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                 830525 segs, 258052604 residues
                                                                                    OM protein - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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Maximum Match 100%
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Maximum DB seq length: 200000000
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088902 rattus norv
081939 arabidopsis
080845 mus musculu
028848 sminthopsis
090809 oncorphochs
080433 bifidobacte
072550 synechocyst
08044 agrobacteri
080461 agrobacteri
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080461 arobidopsis
080467 escenorhabdi
080496 arabidopsis
080407 erosophila
090671 drosophila
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080671 drosophila
080680 arathomonas

Q8TSG3 Q9SF03 Q90W09 Q8GAA3 P72950 Q8CIW4 Q9UK61 P91045 Q8THS2 Q8THS2 Q8THS2

050210 096671 09VU53 08TRV2 08P8W9 08P6S0 09P6E3 08JIQ7

O27851 methanobact Q8vci6 mus musculu Q9sdn3 prunus dulc

Q9JL82 Q28568 027851 Q8VCI6 Q9SDN3

Listing first 45 summaries

SPTREMBL_23:*

Database

sp_archea:*
sp_bacteria:*
sp_huma:*
sp_huma:*
sp_nammal:*
sp_mammal:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution. sp_virus:*
sp_vertebrate:*
sp_unclassified:* sp_organelle:*
sp_phage:*
sp_plant:*
sp_rodent:* sp_rvirus:*
sp_bacteriap:* sp_archeap:*

090y63 rana catesh 09pxh0 anguilla ja 09pxh0 anguilla ja 09pxh6 hizobium m 08tzu8 pyrococcus 08ch5 streptococc 08ch3 clostridium 08jif3 dentex dent 08jif3 acarthopagr 08jif4 acarthopagr 09yi26 sparus malo 09yi26 sparus aura 08yi26 anabaena sp 08yr98 anabaena sp 09r91 streptomyce Q93n27 clostridium Description Q900Y63 Q92PRHO Q92ZVR6 Q8EZH5 Q8EZH5 Q8JIF3 Q8JIF4 Q9JIF2 Q8JIF2 Q8JIF2 Q8JIF2 Q8JIF2 Q8JIF2 Q8JIF2 Q8JIF2 Q8JIF2 DB Length 91 374 358 358 2214 437 437 64 64 87 94 94 208 1245 1245 Query Match 1 Score Result No.

845

16 LQYIKANSKFIGITEL 31

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	oe Ceae	0;
ALIGNMENTS	193N27 PRELIMINARY; PRT; 1310 AA. 193N27; 1-DEC-2001 (TrEMBLrel. 19, Created) 1-DEC-2001 (TrEMBLrel. 19, Last sequence updat 1-DEC-2001 (TrEMBLrel. 23, Last annotation updat 2003 (TrEMBLrel. 23, Last annotation updat 2003 (TrEMBLrel. 23, Last annotation updat 2004 (TrEMBLrel. 23, Last annotation updated 2003 (TrEMBLrel. 23, Last annotation updated 2004 (TrEMBLrel. 23, Last annotation updated 2004 (TrEMBLrel. 23, Last annotation updated 2004 (Trembler). CBI_TaxID=1513; 101 101 101 101 101 101 101 101 101 10	Ouery Match 46.9%; Score 76; DB 2; Length 1310; Best Local Similarity 93.8%; Pred. No. 0.039; Matches 15; Conservative 1; Mismatches 0; Indels
	RESULT 100 30.27 110 30.27 110 30.27 100 30.27	Que Bes Mat

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Sequence 27, Application US/08446692

Patent No. 575951

GENERAL INFORMATION:

APPLICANT: Ladd, Anna
APPLICANT: Ladd, Anna
APPLICANT: Ladd, Anna
APPLICANT: Lamb, Timochy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
NUMBER OF SEQUENCES: 114
CORRESPEDUBENCE ADDRESS:
ADDRESSEE: Maria C.H. Lin
STREET: New York

CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
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48.6%; Score 89; DB 1; Length 33;
Best Local Similarity 100.0%; Pred. No. 5.5e-06;
Matches 19; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER IBM PC Compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/446,692

FILING DATE: 7-UN-1995

CLASSIFICATION: 424

ATTORNEY FAGENT INFORMATION:

NAME: Maria C.H. Lin

REGISTRATION NUMBER: 29,323

REFERENCAMONICATION INFORMATION:

TELECOMMUNICATION INFORMATION:

TELECOMMUNICATION:

TOPOLOGY: Inhear

MOLECULE TYPE: peptide
18 EKKIAKMEKASSVFNVVNS 36
                                3 EKKIAKMEKASSVFNVVNS 21
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US-08-446-692-27
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Search completed: September 24, 2003, 17:00:24 Job time : 10.7704 secs

3 EKKIAKMEKASSVFNVVNS 21

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Sequence 20, Application PC/TUS9513841
GENERAL INFORMATION:
APPLICANT: United Biomedical Inc; Walfield, Alan M.;
APPLICANT: Wang, Chang Yiti GENERAL INFORMATION: Synthetic IgE Membrane Anchor
TITLE OF INVENTION: Synthetic IgE Membrane Anchor
TITLE OF SEQUENCES: 32
CORRESPONDENCE ADDRESS: 32
CORRESPONDENCE ADDRESS: MATIA C.H. Lin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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                                                                                                                                                                                                                                                                                                                                                            Length 21;
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                                                                                                                                                                                                                        NAME/KEY: Peptide
COCATION: 1..21
COCATION: 1..21
OTHER INFORMATION: 3/8-398"
PCT-US95-02121-97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   48.6%; Score 89; DB 5; Le
ilarity 100.0%; Pred. No. 3.3e-06;
Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                         Query Match 48.6%; Score 89; DB 5; L4 Best Local Similarity 100.0%; Pred. No. 3.3e-06; Matches 19; Conservative 0; Mismatches 0;
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CLASSIFICATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WordPerfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/1384.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/328,519
FILING DATE: 25-0CT-1994
CLASSIFICATION:
ATTORNEY/AGENT INFORMATION:
NAME: Lin, Maria C.H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                 18 EKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          3 EKKIAKMEKASSVFNVVNS 21
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REGISTRATION NUMBER: 11
REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION: 212-758-4800
TELEPHAX: 212-751-6849
                TELEFAX: (415) 543-5043
INFORMATION FOR SEQ ID NO: 97:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEE: Maria C.H. Lin
345 Park Avenue
New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      20:
    (206) 467-9600
                                                                                       LENGTH: 21 amino acids
TYPE: amino acid
STRANDEDNESS: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS: LENGTH: 21 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELEX: 421792
INFORMATION FOR SEQ ID NO:
                                                                                                                                                          TOPOLOGY: unknown
MOLECULE TYPE: peptide
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; MOLECULE TYPE: peptide PCT-US95-13841-20
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Best Local Similarity
Matches 19; Conserv
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PCT-US95-13841-20
      TELEPHONE:
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STATE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         48.6%; Score 89; DB 4; Length 21; 100.0%; Pred. No. 3.3e-06;
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378-398"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
PLINGLICATION NUMBER: PCT/US95/02121
FILING DATE: 16-FEB-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0; Mismatches
                                                                                                                                                   NAME: PARMELE, SECVEN W.
REGISTRATION NUMBER: 31,990
REFERENCE/DOCKET NUMBER: 14137-26-4
TELECOMNUNICATION INFORMATION:
TELEPHONE: (206) 467-9600
TELEPA: (206) 623-6793
INFORMATION FOR SEQ ID NO: 97:
SEQUENCE CHARACTERISTICS:
LENGTH: 21 amino acids
TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME: Parmelee, Steven W.
REGISTRATION NUMBER: 31,990
REFERENCE/DOCKET NUMBER: 14137-26-4PC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CLASSIFICATION:

PRIOR APPLICATION DATA:

APPLICATION NUMBER:

FILING DATE: 16-FEB-1994

FILING DATE: 16-FEB-1994

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/935,811

FILING DATE: 26-AUG-1992

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/874,491

FILING DATE: 27-APR-1992

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 07/827,682

FILING DATE: 29-JAN-1992

PRIOR APPLICATION NUMBER: US 07/827,682

FILING DATE: 29-JAN-1992

PRIOR APPLICATION NUMBER: US 07/827,682

FILING DATE: 26-AUG-1991

APPLICATION NUMBER: US 07/749,568

FILING DATE: 26-AUG-1991

ATTORNEY, AGENT INFORMATION:
PRIOR APPLICATION DATA:
APPLICATION WUMBER: US 07/827,682
FILING DATE: 29-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION WUMBER: US 07/749,568
FILING DATE: 26-AUG-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TITLE OF INVENTION: COMPOSITIONS AND TITLE OF INVENTION: CTL IMMUNITY NUMBER OF SEQUENCES: 153
COMPUTER READABLE FORM:
MEDIUM TYPE: FLORPY disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 97, Application PC/TUS9502121 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18 EKKIAKMEKASSVFNVVNS 36
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity 100. Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                       TOPOLOGY: unknown
MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: Peptide
LOCATION: 1..21
OTHER INFORMATION: /
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PCT-US95-02121-97
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APPLICANT: CHESTNOT. Robert W.
APPLICANT: SETTE, Alessandro D.
APPLICANT: CELIS, Esteban
APPLICANT: CRAY, Howard
APPLICANT: CRAY, Howard
TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR ELICITING
TITLE OF INVENTION: CIL IMMUNITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 89; DB 4; Length 21; Pred. No. 3.3e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AUDIESSEE: Townsend and Townsend Khourie and Crew STREET: Steuart Street Tower, One Market Plaza CITY: San Francisco
                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          48.6%; Scor.
100.0%; Pred. No. ...
0; Mismatches
                                                                                                                                                                                                                                                                                                          NAME: Bastian, Kevin L.
REGISTRATION NUMBER: 34,774
REFERENCE/DOCKET NUMBER: 014137-009210US
TELECOMUNICATION INFORMATION:
TELEPHONE: (415) 576-0200
TELEFAX: (415) 576-0300
INFORMATION FOR SEQ ID NO: 12:
                                                                                                                                                     APPLICATION NUMBER: US/08/788,822A FILING DATE: 23-JAN-1997 CLASSIPECATION: 424 PRIOR APPLICATION DATA: APPLICATION NUMBER: US 60/010,510 FILING DATE: 24-JAN-1996 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/935,811
FILING DATE: 26-AUG-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               UMBER: US 07/874,491
27-APR-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US/08/197,484 FILING DATE: 16-FEB-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 97, Application US/08197484 Patent No. 6419931
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              18 EKKIAKMEKASSVFNVVNS 36
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity 100.0
Matches 19; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE CHARACTERISTICS: LENGTH: 21 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TOPOLOGY: linear
MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FILING DATE: 26-AUG-1
PRIOR APPLICATION DATA:
APPLICATION NUMBER: U
    ZIP: 94111-3834
COMPUTER READABLE FORM:
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: amino acid
STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 16
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-788-822A-12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 12
US-08-197-484-97
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Patent No. 6413935
GENERAL INFORMATION:
APPLICANT: Alexander, Jeffrey L.
APPLICANT: Befrees, Shawn
APPLICANT: Sette, Alexandro
ATTLE OF INVENTION: Induction of Immune Response Against
TITLE OF INVENTION: Desired Determinants
                                                                                                                                                                                                    DB 3; Length 21; 3.3e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 48.6%; Score 89; DB 4; Length 21; 100.0%; Pred. No. 3.3e-06; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: HLA-RESTRICTED HEPATITIS B VIRUS CTL
TITLE OF INVENTION: EPITOPES
FILE REFRENCE: 3963-20001.13
CURRENT APPLICATION NUMBER: US/08/464,496
CURRENT FILING DATE: 1995-06-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQUENCES: 30
CORRESPONDENCE ADDRESS:
ADDRESSE: Townsend and Townsend and Crew LLP
STREET: Two Enbarcadero Center, Eighth Floor
CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ORGANISM: Malaria circumsporozoite 378-398
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION NUMBER: 07/749,568
PRIOR FILING DATE: 1991-08-26
NUMBER OF SEQ ID NOS: 75
SOFTWARE: PastSEQ for Windows Version 4.0
SEQ ID NO 17
LENGTH: 21
                                                                                                                                                                                                    48.6%; Score 89; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 07/935,811
PRIOR FILING DATE: 1992-08-26
PRIOR APPLICATION NUMBER: 07/874,491
PRIOR FILING DATE: 1992-04-27
PRIOR APPLICATION NUMBER: 07/827,682
PRIOR FILING DATE: 1992-01-29
                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 17, Application US/08464496
Patent No. 6322789
GEMERAL INFORMATION:
APPLICANT: Epimmune, Inc.
                                                                                                                                                                                                                                                                                       18 EKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                                                3 EKKIAKMEKASSVFNVVNS 21
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                           54:
                  INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 21 amino acids
TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Vitiello, Maria APPLICANT: Chesnut, Robert
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.0
Matches 19; Conservative
                                                                                                                                                                                                                      Best_Local Similarity 100.
Matches 19; Conservative
212-751-6849
                                                                                                                                ; MOLECULE TYPE: peptide US-09-100-409A-54
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 11
US-08-788-822A-12
    TELEFAX:
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Sequence 54, Application US/09100409A

Patent No. 6090388

GENERAL INFORMATION:
APPLICANT: Wang, Chang Yi

TITLE OF INVENTION: PEPTIDE COMPOSITION FOR
TITLE OF INVENTION: IMMUNE DISORDERS
INTERPROBLES: ADDRESS:
ADDRESSEE: WORGAN & FINNEGAN
STREET: 345 PARK AVENUE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 48.6%; Score 89; DB 2; L 100.0%; Pred. No. 3.3e-06; Live 0; Mismatches 0;
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COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBW PC compatible

OPERATING SYSTEM: PC-DOS/MS-DOS

SOFTWARE: PatentIn Release #1.0, Version

SOFTWARE: #1.25

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/100,409A
                                                                                PULLASJEILCATION DATA:
APPLICATION NUMBER: US 08/446,692
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/229,275
FILING DATE: 14-APR-1994
CLASSIFICATION DATA:
APPLICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION DATA:
APPLICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAMME: MATIA C.H. LIN
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-4146 US2
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                MBER: US/08/488,351A
7-JUN-1995
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
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TELEFAX: (516)751-6849
INFORMATION FOR SEQ ID NO: 48:
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CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.0
Matches 19; Conservative
  CURRENT APPLICATION DATA:
APPLICATION NUMBER: US
FILING DATE: 7-JUN-199
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 21 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
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Patent No. 584346
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines NUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           48.6%; Score 89; DB 1; Length 21; 100.0%; Pred. No. 3.3e-06; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                               CURPAINS SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/446,692
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
ATORNEY/AGRMINON-MARTION:
NAME: Maria C.H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-4146 US2
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
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ZIP: 10154-0053
ZOMPUTER READABLE FORM:
MEDIUM TYEE Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                             GENERAL INFORMATION:
APPLICANT: Ladd, Anna
APPLICANT: Wand, Chang Yi
APPLICANT: Wand, Chang Yi
TITLE OF INVENTION: Immunogenic LHRH per
TITLE OF INVENTION: and synthetic univer
NUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS:
ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
US-08-446-692-48
; Sequence 48, Application US/08446692
; Patent No. 5759551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     18 EKKIAKMEKASSVFNVVNS 36
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IEM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (516)751-6849
INFORMATION FOR SEQ ID NO: 48:
SEQUENCE CHARACTERISTICS:
LENGTH: 21 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match 48.6
Best Local Similarity 100.
Matches 19; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              amino acid
                                                                                                                                                                                                                                                                  STREET: 345 FOL
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                                                                                                                                                                                                                                                                                            CITY: N
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APPLICANT: KUBO, Ralph T.

APPLICANT: GREY, Howard M.

APPLICANT: GETE, Alessandro

APPLICANT: CELIS, Esteban

TITLE OF INVENTION: T. LYMPHOCYTES IN HOWANS USING

TITLE OF INVENTION: T. LYMPHOCYTES IN HOWANS USING

TITLE OF INVENTION: SYNTHETIC PEPTIDE EPITOPES

NUMBER OF SEQUENCES: 20

CORRESPONDENCE ADDRESS:

ADDRESSE: TOWNSACA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           48.6%; Score 89; DB 1; Length 21; 100.0%; Pred. No. 3.3e-06; ive 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "Plasmodium falciparum CS
protein at positions 378-398."
                                                                                                                                                                                                                                                                                                              ADDRESSEE: Townsend and Townsend Khourie and Crew STREET: Steuart Street Tower, One Market Plaza CITY: San Francisco STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/186,266
FILING DATE: Z5-JAN-1994
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: US 08/103,396
FILING DATE: 06-AUG-1993
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/027,746
FILING DATE: 05-MAR-1993
PRIOR APPLICATION NUMBER: US 07/926,666
FILING DATE: 07-AUG-1992
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Bastian, Kevin L.
REGISTRATION NUMBER: 34,774
REFERENCE/DOCKET NUMBER: 14137-50-4
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/159,339
FILING DATE: 29-NOV-1993
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          18 EKKIAKMEKASSVFNVNS 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: (415) 543-9600
TELEFAX: (415) 543-5043
INFORMATION FOR SEO ID NO: 6:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           21 amino acids
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                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; LOCATION: 1..21

; OTHER INFORMATION:

; OTHER INFORMATION:

US-08-186-266-6
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
Matches 19; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                     94105-1493
                                                                                                                                                                                                                                                                                                                                                                                                     COUNTRY:
                                           RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 7
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                                                                                                                                                                                                     Length 424;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 91; DB 3; Length 424
Pred. No. 5.3e-05;
                                                                                                                                                                                                   Score 91; DB 3; Length 424
Pred. No. 5.3e-05;
3; Mismatches 6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7 LRPGSSGPSLD-----EKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7 LRPGSSGPSLD-----EKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: De Wilde, Michel
APPLICANT: Cohen, Joseph
TITLE OF INVENTION: Hybrid Protein Between CS
TITLE OF INVENTION: from Plasmodium and HBSAG
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OPERATING SYSTEM: DOS
SOFTWARE: FastSEG for Windows Version 2.0
CURRENT APPLICATION DAY:
APPLICATION NUMBER: US/08/932,929B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ADDRESSEE: SmithKline Beecham Corporation
STREET: 709 Swedeland Road
CITY: King of Prussia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Baumeister, Kirk
REGISTRATION NUMBER: 33,833
REFERENCE/DOCKET NUMBER: B45015-1FWC2
TELECOMMUTCATION INFORMATION:
TELEPHONE: 610-270-5096
TELEFAX: 610-270-5090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/760,797
FILING DATE: 04-DEC-1996
APPLICATION NUMBER: 08/42,612
FILING DATE: 17-MAY-1995
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 3, Application US/08932929B Patent No. 6169171
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO: 3: SEQUENCE CHARACTERISTICS: LENGTH: 424 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       49.7%;
                                                                                                                                                                                                   Query Match 49.7%;
Best Local Similarity 55.3%;
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM Compatible OPERATING SYSTEM: DOS
                                       INFORMATION FOR SEQ ID NO: 1
SEQUENCE CHARACTERISTICS:
LENGTH: 424 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
  610-270-5090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Diskette
                                                                                                                   STRANDEDNESS: single
TOPOLOGY: linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:
MEDIUM TYPE: Diskett
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Best Local Similarity
Matches 21; Conserva'
                                                                                                    TYPE: amino acid
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US-08-932-929B-1
TELEFAX:
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                                                                                                                                                                                                                                                                                                                                                                                  RESULT 5
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Gaps

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Pred. No. 5.3e-05;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 1, Application US/08932929B
Fatent No. 6169171
GENERAL INFORMATION:
APPLICANT: De Wilde, Michel
APPLICANT: Cohen, Joseph
TITLE OF INVENTION: Hybrid Protein Between CS
TITLE OF INVENTION: from Plasmodium and HBsAG
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSE: SmithKline Beecham Corporation
STREET: 709 Swedeland Road
CITY: King of Prussia
             COMPUTER: 1BM Compatible
COMPUTER: 1BM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: 1BM Compatible
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/760,797A
FILING DATE: 04-DEC-1996
CLASSIFICATION DATA:
APPLICATION NUMBER: 08/42,612
FILING DATE: 17-MAY-1995
ATTORNEY/AGENT INFORMATION:
NAME: Baumeister, Kirk
REGISTRATION NUMBER: 33,833
REFERENCE/DOCKET NUMBER: 33,833
REFERENCE/COCKET NUMBER: B45015-1C2
TELEPHONE: 610-270-5096
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ZIP: 19406
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEG for Windows Version 2.0
CURRENY APPLICATION DATA:
APPLICATION NUMBER: US/08/932,929B
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PRIOR APPLICATION DATA:
PREDICATION NUMBER: 08/760,797
FILING DATE: 04-DEC-1996
APPLICATION NUMBER: 08/42,612
FILING DATE: 17-MAY-1995
FILING DATE: 17-MAY-1995
ATORNEY/AGENT INFORMATION:
NAME: Baumeister, Kirk
REGISTRATION NUMBER: 33,833
REFERENCE/ADCKET NUMBER: B45015-1FWC2
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                         TELEX:
INFORMATION FOR SEQ ID NO: 3:
SEQUENCE CHARACTERISTICS:
LENGTH: 424 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 49.7%;
Best Local Similarity 55.3%;
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  single
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US-08-760-797A-3
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MEDIUM TYPE:
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US-08-932-929B-1
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COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        7 LRPGSSGPSLD-----EKKIAKMEKASSVFNVVNS 36
                                                  Sequence 1, Application US/08760797A
Patent No. 5928902
GENERAL INFORMATION:
APPLICANT: Cohen, Joseph
TITLE OF INVENTION: Hybrid Protein Between CS
TITLE OF INVENTION: from Plasmodium and HBsAG
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: SmithKline Beecham Corporation
STREET: 709 Swedeland Road
CITY: King of Prussia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
APPLICANT: De Wilde, Michel
APPLICANT: Cohen, Joseph
TITLE OF INVENTION: Hybrid Protein Between CS
TITLE OF INVENTION: from Plasmodium and HBsAG
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: SmithKline Beecham Corporation
STREET: 709 Swedeland Road
CITY: King of Prussia
                                                                                                                                                                                                                                                                                                                                                                                                                                OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/760,797A
FILING DATE: 04-DEC-1996
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/42,612
FILING DATE: 17-MAY-1995
ATTORNEY-AGENT INFORMATION:
NAME: Baumeister, Klirk
REGISTRATION NUMBER: 33,833
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          B45015-1C2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 33,833
REFERENCE/DOCKET NUMBER: B4
TELECOMMUNICATION INFORMATION:
TELEPHONE: 610-270-5096
                                                                                                                                                                                                                                                                                                                                  ZIP: 19406
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               LENGTH: 423 amino acids:
TYPE: amino acid
TYPE: amino acid
STRANDEDNESS: single
: TOPOLOGY: linear
US-08-760-797A-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     21; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: 610-270-5090
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 19406
COMPUTER READABLE FORM:
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Matches 21; Conserva
                                                                                                                                                                                                                                                                                                                              USA
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US-08-760-797A-3
                                US-08-760-797A-1
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Sequence 1, Appli
Sequence 3, Appli
Sequence 1, Appli
Sequence 3, Appli
Sequence 6, Appli
Sequence 48, Appli
Sequence 48, Appli
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20, Appl
                                                                                                                                 September 24, 2003, 16:46:20; Search time 10.6704 Seconds (without alignments) 142.750 Million cell updates/sec
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Sequence 48, 7
Sequence 48, 7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
Sequence
Sequence
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/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/Re_COMB.pep:*
/cgn2_6/ptodata/1/iaa/Re_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                             1 XHWSYGLRPGSSGPSLDEKKIAKMEKASSVFNVVNS
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US-08-446-62-48
US-08-446-62-48
US-09-100-409A-54
US-09-100-409A-54
US-08-197-484-97
US-08-197-484-97
PCT-US95-02121-97
PCT-US95-02121-97
US-08-446-692-27
US-08-488-351A-27
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US-08-817-933A-7
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US-08-197-484-96
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US-08-932-929B-1
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Maximum Match 100%
Listing first 45 summaries
                                                                                           - protein search, using sw model
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Minimum DB seq length: 0
Maximum DB seq length: 200000000
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Query
Match Length D
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                                                                                           OM protein
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                                                                                                                                         Run on:
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No.
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Sequence 6, Appli

Sequence 20, 1 Sequence 17, 2 Sequence 6, Al

US-08-188-223-6 US-08-968-466-6 US-08-478-546B-6

5169933-30

US-08-465-167A-20 US-08-627-820-20

PCT-US92-07218-17

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Jessell, Thomas M. and Avihu Klar
APPLICANT: Jessell, Thomas M. and Avihu Klar
TITLE OF INVENTION: CLONING, EXPRESSION AND USES OF A
TITLE OF INVENTION: NOVEL SECRETED PROTEIN, F-SPONDIN
NUMBER OF SEQUENCES: 20
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
FILING DATE: January 5, 1995
CLASSIFICATION: 435
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Pred. No. 5.1e-05;
3; Mismatches 6;
US-08-694-865-16
US-09-124-491-16
US-09-124-491-16
US-08-465-167A-19
US-08-627-820-19
PCT-US92-07218-16
US-08-521-079-23
US-08-521-079-23
US-07-690-983D-18
US-07-690-983D-18
US-08-305-871A-12
US-08-305-871A-12
US-08-305-871A-12
US-08-305-871A-12
US-08-305-871A-12
US-08-305-871A-12
US-08-305-871A-12
US-08-305-871A-12
US-08-305-871A-12
US-08-124-491-4
US-09-124-491-4
US-09-124-491-4
US-08-124-491-4
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US-08-124-491-4
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NAME: White, John P.
REGISTRATION NUMBER: 28,678
REGISTRATION NUMBER: 40028-A-PCT-US
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 278-0400
TELEFAX: (212) 391-0526
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ALIGNMENTS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        3: Cooper & Dunham LLP
1185 Avenue of the Americas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 1

US-08-313-288B-18

; Sequence 18, Application US/08313288B

; Patent No. 5750502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO: 18:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 49.7%;
Best Local Similarity 55.3%;
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              412 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS
    ZIP: 10036
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TOPOLOGY: linear MOLECULE TYPE: peptide US-08-313-288B-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS: single
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: New York
STATE: New York
COUNTRY: USA
    MEDIUM TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
    \begin{matrix} & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\ & 0.00 \\
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STREET:
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LOCATION: (46)..(46)

OTHER INFORMATION: Amidated glycine or glycinamide

NAME/KEY: PEPTIDE

LOCATION: (1)..(10)

OTHER INFORMATION: Amino acid sequence 1-10 of the human GDRH hormone

NAME/KEY: PEPTIDE

LOCATION: (11)..(16)

OTHER INFORMATION: Spacer peptide

LOCATION: (17)..(31)

OTHER INFORMATION: Amino acid sequence 830-844 of the Tetanus toxoid precursor

OTHER INFORMATION: (Tentoxylysin)

COCATION: (32)..(37)

OTHER INFORMATION: Spacer peptide

LOCATION: (32)..(37)

OTHER INFORMATION: Amino acid sequence 2-10 of the human GDRH hormone

UCCATION: (38)..(46)

COTHER INFORMATION: Amino acid sequence 2-10 of the human GDRH hormone

US-09-848-834A-19
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 6; Gaps
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48.6%; Score 89; DB 9; Length 46;
Best Local Similarity 63.3%; Pred. No. 1.7e-05;
Matches 19; Conservative 2; Mismatches 3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Search completed: September 24, 2003, 17:33:09 Job time: 18.0499 secs
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                                                                                                                                                                                                                         TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR ELICITING CTL IMMUNITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
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                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend Khourie and Crew STREET: Steuart Street Tower, One Market Plaza CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER READABLE FORM:

MEDIUM TYPE: FLORPY disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/128,711
FILING DATE: 22-Apr-2002
CLASSIFICATION: <UNknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        48.6%; Score 89; DB 15; Length 21; 100.0%; Pred. No. 6.7e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA'S

PRILING DATE: 10-FEB-1994
APPLICATION NUMBER: US/08/197,484
APPLICATION NUMBER: US 07/935,811
FILING DATE: 26-AUG-1992
APPLICATION NUMBER: US 07/874,491
FILING DATE: 27-APR-1192
APPLICATION NUMBER: US 07/827,682
FILING DATE: 29-JAN-1992
APPLICATION NUMBER: US 07/749,568
FILING DATE: 26-AUG-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REGISTRATION NUMBER: 31,990
REFERENCE/DOCKET NUMBER: 14137-26-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      100.0%; Pred w.
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                                                                                                                                CHESTNUT, Robert W.
SETTE, Alessandro D.
CELIS, Esteban
GRAY, Howard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEPHONE: (206) 467-9600
TELEFAX: (206) 623-6793
INFORMATION FOR SEQ ID NO: 97:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Parmelee, Steven W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELECOMMUNICATION INFORMATION:
                                          Sequence 97, Application US/10128711 Publication No. US2030099634A1 GENERAL INFORMATION: VITIELLO, MATIA A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 21 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18 EKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRANDEDNESS: unknown
                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: Peptide
                                                                                                                                                                                                                                                                                                                                                                                 STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: amino acid
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Matches 19; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY:
                  US-10-128-711-97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-10-128-711-97
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RESULT 13
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EKKIAKMEKASSVFNVVNS 21

Dp

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OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of the INFORMATION: RH hormone linked by a spacer to amino sequence 830-844 of the UTHER INFORMATION: tanus toxoid precursor (Tentoxylysin)
NAME, KEY: MOD_RES
LOCATION: (1)..(1)
OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of hum oTHER INFORMATION: GRHH linked by a spacer to amino acid sequence 830-844 of Tema OTHER INFORMATION: toxoid precursor (Tentoxylysin) linked by a spacer to amino content information: sequence 1-10 of GRRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COTATION: (11)..(16)
COTHER INFORMATION: Spacer peptide
NAME/KET: PEPTIDE
LOCATION: (17)..(31)
COTHER INFORMATION: Amino acid sequence 830-844 of the Tetanus toxoid precursor
US-09-848-834A-15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION: (1)..(10)
OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 31;
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OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
NAME/KEY: MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: 0209/9/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.0
SEQ ID NO 19
                                                                                                      APPLICANT: Aphton Corporation
TITLE OF INVENTON: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: 05/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR PAPLICATION NUMBER: 60/202,328
NUMBER OF SEQ ID NOS: 20
SOFTWARE: PATENTIN VETSION 3.0
SEQ ID NO 15
LENGTH: 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 48.6%; Score 89; DB 9; I
Best Local Similarity 63.3%; Pred. No. 1.1e-05;
Matches 19; Conservative 2; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 HWSYGLRPGSSGPSLDEKKIAKMEKASSVF 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 15, Application US/09848834A Patent No. US20020076416A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; Sequence 19, Application US/09848834A; Patent No. US20020076416A1; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Artificial Sequence
                                                                                 GENERAL INFORMATION:
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LOCATION: (1)..(1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-848-834A-19
JS-09-848-834A-15
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
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Score 89; DB 12; I
Pred. No. 6.7e-06;
0; Mismatches 0;
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Best Local Similarity 100.0%; P.
Matches 19; Conservative 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18 EKKIAKMEKASSVFNVVNS 36
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US-10-001-469-1404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Plasmodium falciparum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches 19; Conservative
                                           US-09-942-052-711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-942-052-711
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| Publication No. US20030165505A1
| General Information No. US20030165505A1
| General Information No. US20030165505A1
| APPLICANT: Application, Arthur B.
| APPLICANT: Challita-Eid, Pia M.
| APPLICANT: Ratiano, Arthur B.
| APPLICANT: Ratiano, Arthur B.
| APPLICANT: Marry Marry Marry Applicant: More 1.00 Marry Applicant: More 1.00 Marry Applicant: More 1.00 Marry Marry Mar
                                                                                             APPLICANT: CHALLITA-EID, PIA
APPLICANT: HUBERT, RENE
APPLICANT: HUBERT, RENE
APPLICANT: HAITANO, ARTHUR
APPLICANT: ARAN, DANIEL
APPLICANT: ELVIN, ELANA
APPLICANT: FAIS, MARY
APPLICANT: GEN WANGMAO
APPLICANTON: OTHER CANCERS
FILE REFERENCE: 51158-20033.00
CURRENT APPLICATION NUMBER: US/09/935,384
CURRENT APPLICATION NUMBER: 60/227,098
PRIOR FILING DATE: 2000-08-22
PRIOR FILING DATE: 2000-08-22
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Pred. No. 6.7e-06;
0; Mismatches 0;
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 761
Sequence 710, Application US/09935384
Publication No. US20030166526A1
GENERAL INFORMATION:
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100.0%; Pre
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; TYPE: PRT
; ORGANISM: Plasmodium falciparum
US-09-935-384-710
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 783
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 710
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Matches 19; Conservative
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Best Local Similarity 100.
Matches 19; Conservative
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GORGANISM: Homo sapiens
US-10-062-109A-761
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US-10-062-109A-761
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Sequence 711, Application US/09942052
Publication No. US20030170626A1
GENERAL INFORMATION:
APPLICANT: Raitano, Arthur B.
APPLICANT: Hubert, Rene S.
APPLICANT: Hubert, Rene S.
APPLICANT: Hubert, Rene S.
APPLICANT: Ge, Wangmao,
APPLICANT: APPLI
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; Sequence 1404, Application US/10001469
; Bequence 1404, Application US/200300915621
; GENERAL INFORMATION:
; APPLICANT: ARTHUR
; APPLICANT: RAITANO, ARTHUR
; APPLICANT: RAITANO, ARTHUR
; APPLICANT: FARIS, MARY
; APPLICANT: HUBERT, RENE
; APPLICANT: HUBERT, RENE
; APPLICANT: HUBERT, RENE
; APPLICANT: HUBERT, RAIS
; APPLICANT: HUBERT, RAIS
; APPLICANT: HUBERT, RAIS
; APPLICANT: NUMBER: 1018341 USEUL
; TITLE OF INVENTION: UNMBER: 60/157,902
; PRIOR PELICATION NUMBER: 60/157,902
; PRIOR PELICATION NUMBER: 60/291,118
; PRIOR PELICATION NUMBER: 09/680,728
; PRIOR FILING DATE: 2000-10-05
; RUBER OF SEQ ID NOS: 2888
; SOFTWARE: Patentin Ver. 2.1
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APPLICANT: CARALLIANE CHARLES, MARY
APPLICANT: SAFRRAN, DOUGLAS
APPLICANT: AFRA, DANIEL
APPLICANT: AFRA, DANIEL
APPLICANT: HUBERT, REAR
APPLICANT: HUBERT, REAR
APPLICANT: HUBERT, RANGMAO
APPLICANT: JAKOBOVITS, ANA
TITLE OF INVENTION: NUCLEIC ACIDS AND CORRESPONDING PROTEINS ENTITLED
TITLE OF INVENTION: DETECTION OF CANCER
TITLE OF INVENTION: DATE: 2001-08-17
CURRENT APPLICATION NUMBER: 05/09/932,165
CURRENT FILING DATE: 2001-08-17
PRIOR PAPLICATION NUMBER: 60/226,329
PRIOR FILING DATE: 2000-08-17
NUMBER OF SEQ ID NOS: 1508
SOFTWARE: Patentin Ver: 2.1
SEQ ID NO 1482
LENGTH: 21
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APPLICANT: Sette, Alessandro
APPLICANT: Sette, Alessandro
APPLICANT: Sette, Alessandro
APPLICANT: Sette, Alessandro
APPLICANT: Fikes, John D.
TILLE OF INVENTION: Heteroclitic Analogs and Related Methods
FILE REFERENCE: 2060.0090003
CURRENT APPLICATION NUMBER: US/10/116,118
CURRENT FILING DATE: 2002-08-07
PRIOR APPLICATION NUMBER: US 60/166,529
PRIOR APPLICATION NUMBER: US 60/239,008
PRIOR PILING DATE: 2000-10-06
NUMBER OF SEQ ID NOS: 53
SOFTWARE: Patentin version 3.1
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48.6%; Score 89; DB 12;
Best Local Similarity 100.0%; Pred. No. 6.7e-06;
Matches 19; Conservative 0; Mismatches 0;
Sequence 1482, Application US/09932165 Publication No. US20030134784A1 GENERAL INFORMATION:
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Sequence 33, Application US/10116118
Publication No. US20030143672A1
GENERAL INFORMATION:
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Best Local Similarity 100.0%; P.
Matches 19; Conservative 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ; ORGANISM: Plasmodium falciparum US-09-932-165-1482
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                                                                                                    CHALLITA-EID, PIA
                                                                          APPLICANT: RAITANO, ARTHUR APPLICANT: CHALLITA-EID, 1
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US-09-935-384-710
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LENGTH: 21
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                                      RESULT 5

US-09-820-843A-31

US-09-820-843A-31

Sequence 31, Application US/09820843A

Publication No. US20030039963A1

GENERAL INFORMATION:

APPLICAMY: COUNCIL of Scientific and Industrial Research

TITLE OF INVENTION: USEFUL AS ANTI-INFECTIVES

FILE REFERENCE: Q63915

CURRENT APPLICATION UNDER: US/09/820,843A

CURRENT FILING DATE: 2001-03-30

NUMBER OF SEQ ID NOS: 118

SEQ ID NOS: 118

LENGTH: 396
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Deblication No. US20030175285A1

Sequence 54, Application US/10239313A

Publicantion No. US20030175285A1

Sequence 54, Application US/10239313A

Publicant: KINGUER - HAMOUR, Christine

APPLICANT: CORVAIA, Nathalie

APPLICANT: GOEYSCH, Liliane

TITLE OF INVENTION: MOLECULE OF PHARMACEUTICAL INTEREST COMPRISING AT ITS

TITLE OF INVENTION: MOLECULE OF PHARMACEUTICAL INTEREST COMPRISING AT ITS

TITLE OF INVENTION: MOMBER: OS A GLUTAMIC ACID OR A GLUTAMINE IN THE FORM

TITLE OF INVENTION: OF A PHYSIOLOGICALLY ACCEPTABLE STRONG ACID

FILE REFERENCE: 343 727 - US

CURRENT APPLICATION NUMBER: ER 00/03711

PRIOR APPLICATION NUMBER: PCT 01/70772

PRIOR APPLICATION NUMBER: PCT 01/70772

PRIOR FILING DATE: 2001-03-22

NUMBER OF SEQ ID NOS: 697

SOFTWARE: Patentin Ver. 2.1

SEQ ID NO 54

LENGTH: 19
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FEATURE:
NAME/KEY: misc_feature
OTHER INFORMATION: Circumsporozoite (CS) protein
NAME/KEY: misc_feature
OTHER INFORMATION: gi|4493889
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ouery Match 48.6%; Score 89; DB 12; Best Local Similarity 100.0%; Pred. No. 6e-06; Matches 19; Conservative 0; Mismatches 0
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                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
ORGANISM: Plasmodium falciparum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT;
CORGANISM: Plasmodium malariae
US-10-239-313A-54
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OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 378-398 of OTHER INFORMATION: Plasmodium falciparum CSP protein linked by a spacer to amino OTHER INFORMATION: id sequence 2-10 of the GRRH hormone
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: (25)..(33)
OTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH hormone
                                                                                                                                                                                                                                                     LOCATION: (1)...(20)
OTHER INFORMATION: Amino acid sequence 378-398 of the Plamodium OTHER INFORMATION: falciparum circumsporozoite (CSP) protein
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OTHER INFORMATION: Amino acid sequence 378-398 of the Malaria
OTHER INFORMATION: (Plasmodium falciparum) circumsporozolte
OTHER INFORMATION: ( CSP) protein
                                                                                                                                                                                                                                                                                                                                                                        Length 20;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: MOD_RES.
LOCATION: (1)..(1)
OTHER INFORMATION: Amidated aspartic acid
NAME/KEY: MOD_RES
LOCATION: (33)..(33)
OTHER INFORMATION: Amidated glycine or glycinamide
NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                   51.9%; Score 95; DB 9; Le
100.0%; Pred. No. 8.8e-07;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 95; DB 9; Lk
Pred. No. 1.6e-06;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.0
                       PRIOR APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: PatentIn version 3.0
SEQ ID NO 3
LENGTH: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              US-09-848-834A-12
; Sequence 12, Application US/09848834A
; Patent No. US20020076416A1
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100.0%; Prev
0; )
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LOCATION: (21)..(24)
OTHER INFORMATION: Spacer peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                              17 DEKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 DEKKIAKMEKASSVFNVVNS 20
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                                                                                                                                                             TYPE: PRT ORGANISM: Plasmodium falciparum
       CURRENT FILING DATE: 2001-05-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
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20; Conserv
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Best Local Similarity
Matches 20; Conserv
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                                                                                                                                                                                                             FEATURE:
NAME/KEY: PEPTIDE
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LENGTH: 33
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Best Local (
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION: (11)...(16)
OTHER INFORMATION: Spacer peptide
MAMB/KET: PEPTIDE
LOCATION: (17)...(36)
OTHER INFORMATION: Anino acid sequence 378-398 of the Plasmodium falciparum
OTHER INFORMATION: circumsporozoite (CSP) protein
NAME/KEY: PEPTIDE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LOCATION: (43)..(51)
OTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH hormone
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  Length 36;
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                                               Indels
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99.5%; Score 182; DB 9; I
100.0%; Pred. No. 6.5e-19;
ive 0; Mismatches 0;
                                                                                                                                                                                                                      US-09-848-834A-20
Sequence 20, Application US/09848834A
Sequence 20, Application US/09848834A
Sequence 20, Application US/09848834A
SEQUENCE INFORMATION:
TITLE OF INVENTION: Chimeric Peptide Immunogens
TITLE OF INVENTION: Chimeric Peptide Immunogens
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR PILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99.5%; Score 182; DB 9; I
100.0%; Pred. No. 9.8e-19;
tive 0; Mismatches 0;
                                                                                        2 HWSYGLRPGSSGPSLDEKKIAKMEKASSVFNVVNS 36
                                                                                                                2 HWSYGLRPGSSGPSLDEKKIAKMEKASSVFNVVNS 36
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APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 110.2865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 3, Application US/09848834A Patent No. US20020076416A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION: (37)..(42)
OTHER INFORMATION: Spacer peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Artificial Sequence
                                               Conservative
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Matches 35; Conserva
                     Best Local Similarity
Matches 35; Conserv
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US-09-848-834A-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 20
LENGTH: 51
  Query Match
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(without alignments)
301.778 Million cell updates/sec
                                                                                                                   September 24, 2003, 16:57:10; Search time 18.0499 Seconds
5.1.6
Compugen Ltd.
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1 XHWSYGLRPGSSGPSLDEKKIAKMEKASSVFNVVNS 36
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                                                                                                                                                                                                                                                                                                                                              566894 seqs, 151307093 residues
GenCore version
Copyright (c) 1993 - 2003
                                                                             OM protein – protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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Maximum DB seq length: 200000000
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                                                                                                                                                                                                     Title:
Perfect score:
Sequence:
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Published_Applications_AA:* Database

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Description	Sequence 16, Appl	Sequence 20, Appl	Sequence 3, Appli	Sequence 12, Appl	Sequence 31, Appl	Sequence 54, Appl	Sequence 1482, Ap	Sequence 33, Appl	Sequence 710, App	761,	Sequence 711, App	Sequence 1404, Ap	Sequence 97, Appl	Sequence 15, Appl	Sequence 19, Appl
	ID	US-09-848-834A-16	US-09-848-834A-20	US-09-848-834A-3	US-09-848-834A-12	US-09-820-843A-31	US-10-239-313A-54	US-09-932-165-1482	US-10-116-118-33	US-09-935-384-710	US-10-062-109A-761	US-09-942-052-711	US-10-001-469-1404	US-10-128-711-97	US-09-848-834A-15	US-09-848-834A-19
	DB	9	6	σ	6	11	12	12	12	12	12	12	15	15	6	σ
	Query Match Length DB	36	51	20	33	396	19	21	21	21	21	21	21	21	31	46
æ	Query Match	99.5	99.5	51.9	51.9	49.7	48.6	48.6	48.6	48.6	48.6	48.6	48.6	48.6	48.6	48.6
	Score	182	182	95	95	91	89	88	89	88	88	88	89	89	83	88
	Result No.	п	7	3	4	S	9	7	8	6	10	11	12	13	14	15

Sequence 13, Appl Sequence 14, Appl Sequence 17, Appl Sequence 18, Appl Sequence 23, Appl	15, 53, 96,	398,	64, 67, 59,		37, 444, 447, 522, 588,
9 US-09-848 9 US-09-848 9 US-09-848 9 US-09-848 11 US-09-74	11 US-09-865 12 US-10-239 15 US-10-128	12 US-10-239-3 12 US-10-239-3 12 US-10-239-3 12 US-10-239-3	12 US-10 12 US-10 12 US-10 12 US-10	12 US-10-239- 12 US-10-239- 12 US-10-239- 12 US-10-239- 12 US-10-239- 12 US-10-239-	17 12 US-10-239-313A-37 17 12 US-10-239-313A-40 17 12 US-10-239-313A-47 17 12 US-10-239-313A-47 17 12 US-10-239-313A-59 17 12 US-10-239-313A-58 17 12 US-10-239-313A-58 17 12 US-10-239-313A-61
87 47.5 87 47.5 87 47.5 87 47.5 44.8	82 44.8 79 43.2 79 43.2	75 41.0 75 41.0 75 41.0 75 41.0	28 75 41.0 17 29 75 41.0 17 30 75 41.0 17 31 74 40.4 17	74 40.4 73 39.9 73 39.9 73 39.9 73 39.9	38 73 39.9 1. 40 73 39.9 1. 41 73 39.9 1. 42 73 39.9 1. 43 73 39.9 1. 44 73 39.9 1. 45 73 39.9 1.

ALIGNMENTS

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OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of t is OTHER INFORMATION: RH hormone linked by a spacer to amino acid sequence 378-398 c OTHER INFORMATION: the Plasmodium falciparum circumsporozoite (CSP) protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: MOD_RES.
LOCATION: (1)..(1)
OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
NAME/KEY: PEPTIDE
LOCATION: (1)..(10)
OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LOCATION: (17). (36)
OTHER INFORMATION: Amino acid sequence 378-398 of the Malaria OTHER INFORMATION: (Plasmodium falciparum) circumsporozoite OTHER INFORMATION: (CSP) protein
                                                                                                                                         TITLE OF INVENTION: Chimeric Peptide Immunogens FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NGS: 20
SOFTWARE: Patentin version 3.0
                         Sequence 16, Application US/09848834A Patent No. US20020076416A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: PEPTIDE
COCATION: (11)..(16)
OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                   GENERAL INFORMATION:
APPLICANT: Aphton Corporation
US-09-848-834A-16
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SEQ ID NO 16
LENGTH: 36
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MEDLINE-22366746; PubMed=12467976;
Escalante A.A., Grebert H.M., Isea R., Goldman I.F., Basco L.,
Bagris M., Biswas S., Kariuki S., Lal A.A.;
"A study of genetic diversity in the gene encoding the
circumsporoacite protein (CSP) of Plasmodium falciparum from different
transmission areas-XVI. Asembo Bay Cohort Project.";
MOL. Biochem. Parasitol. 125:83-90(2002).
EMBL; AF540444; AAN87578.1; ---
SEQUENCE 393 AA; 42276 MW; 7D2C7CCFAA3153A9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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"Gene cloning of circumsporozoite protein (CSP) II gene from Plasmodium falciparum (FCCI//HN).";
Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
EMBL, AV096572; AAM19072.1;
InterPro; IPR0000667; Crcmsprzoite.
                                                                                                                         Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plasmodium falciparum.
Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
NCBL_TaxID=5833;
                                                                                                                                                                                                                                                                                                                                                           Query Match 51.4%; Score 94; DB 5; Length 393; Best Local Similarity 60.5%; Pred. No. 5.3e-05; Matches 23; Conservative 3; Mismatches 4; Indels
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Pred. No. 2.1e-05;
3; Mismatches 6; Indels
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            Q819J1;
01-MAR-2003 (TrEMBLrel. 23, Created)
01-WAR-2003 (TrEMBLrel. 23, Last sequence update)
01-WAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                            342 IKPGSAGKPKNELDYENDIEKKICKMEKCSSVFNVVNS 379
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-OCT-2002 (TrEMBLrel. 22, Created)
01-OCT-2002 (TrEMBLrel. 22, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Circumsporozoite protein II (Fragment).
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PRT;
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PRINTS; PR01303; CRCMSPRZOITE.
SMART; SM00209; TSP1; 1.
PROSITE; PS50092; TSP1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 49.78;
55.38;
                                                                            Circumsporozoite protein.
PRELIMINARY;
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                                                                                                         Plasmodium falciparum.
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                                                                                                                                          NCBI_TaxID=5833;
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Jongwuitwes S., Tanabe K., Hughes M.K., Kanbara H., Hughes A.L.;
"Allelic variation in the circumsporozoite protein of Plasmodium
falciparum from Thai field isolates.";
Am. J. Trop. Med. Hyg. 51:659-668(1994).

EMBL; M83161; AAA29574.1; -.
InterPro; IPR003867; Crcmsprzoite.
InterPro; IPR003867; Crcmsprzoite.
Fram: PF00090; tsp_1; 1.
PRINTS; PR01303; CRCMSPRZOITE.
SMART; SMO2099; TSP1; 1.
PROSITE; PS50092; TSP1; 1.
SEQUENCE 420 AA; 45155 MW; 3A85B92432C2893C CRC64;
                                                                                                                Eukaryota; Alveilata; Apicomplexa; Haemosporida; Plasmodium.
NCBL_TaxID=5833;
                                                                                                                                                                                                                                                                                                                                                                                                                                        369 IKPGSAGKPKDELEYENDIEKKICKMEKCSSVFNVVNS 406
                                                    (TrEMBLrel. 01, Last sequence update) (TrEMBLrel. 23, Last annotation update)
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Pred. No. 2.1e-05;
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STRAIN-Asembo Bay;
MEDLINE-22356746; PubMed-12467976;
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57.9%;
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Matches 23; Conservative
                                                                               Circumsporozoite protein.
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Best Local Similarity
22; Conserve
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Q25838;
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Q819J2;
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"A study of genetic diversity in the gene encoding the circumsporozoite protein (CSP) of Plasmodium falciparum from different transmission areas-XVI. Asembo Bay Cohort Project.";
Mol. Biochem. Parasitol. 125:83-90(2002).

EMBL, AF540463; AAN87597.1;
SEQUENCE 360 AA; 39062 MW; 65058844270D666C CRC64;
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Magris M., Biswas S., Kariuki S., Lal A.A.;
A study of genetic diversity in the gene encoding the
circumsporozoite protein (CSP) of Plasmodium falciparum from different
transmission areas-XVI. Asembo Bay Cohort Project.";
Mol. Biochem. Parasitol. 125:83-90(2002).
EMBL: AF540464; AAN87598.1:
SEQUENCE 412 AA; 44304 MW; 5D6854F31AEF949A CRC64;
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57.9%; Pred. No. 2.1e-05;
01-MAR-2003 (TrEMBLrel. 23, Created)
1-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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Last annotation update)
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01-MAR-2003 (TrEMBLrel. 23, Created)
01-MAR-2003 (TrEMBLrel. 23, Last seq
01-MAR-2003 (TrEMBLrel. 23, Last ann
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MEDLINE-22356746; PubMed-12467976;
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Matches 22; Conservative
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                                                                            PRELIMINARY;
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MEDLINE-22356746;
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Best Local Similarity
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NCBI_TaxID=5833;
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"A study of genetic diversity in the gene encoding the circumsporozoite protein (CSP) of Plasmodium falciparum from different transmission areas-XVI. Asembo Bay Cohort Project.";
Mol. Blochem. Parasitol. 12:83-90(2002).

EMBL; AF540443; AAN07577.1;
SEQUENCE 389 AA, 41880 MW; 4F2C32A159B13F20 CRC64;
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6
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NCBI_TaxID=5833;
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01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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Q819J1
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RESULT 12

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Page

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STRAIN-Asembo Bay;
MEDLINE-2236746; PubMed=12467976;
MEDLINE-22356746; PubMed=12467976;
MEDLINE-22356746; PubMed=12467976;
Magris M., Biswas S., Kariuki S., Lal A.A.;
"A study of genetic diversity in the gene encoding the circumsporozoite protein (CSP) of Plasmodium falciparum from different transmission areas-XVI. Asembo Bay Cohort Project.";
Mol. Biochem. Parasitol. 125:83-90(2002).
EMBL; AF540462; AAN87596.1;
SEQUENCE 360 AA; 39093 MW; 6504CC012649236C CRC64;
                                                                                                                                                                                                                                                                  Plasmodium falciparum.
Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
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NCBI_TaxID=5833;
               Length 396;
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Score 98; DB 5; Length 55.
Pred. No. 1.4e-05;
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63.2%; Pred. No. 1.4e-05;
ive 3; Mismatches 3; Indels
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01-MAR-2003 (TrEMBLrel. 23, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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63.2%;
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                                           24; Conservative
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                           Best Local Similarity
Matches 24; Conserv
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               Query Match
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Magris M., Biswas S., Kariuki S., Lal A.A.;
"A study of genetic diversity in the gene encoding the
circumsporozoite protein (CSP) of Plasmodium falciparum from different
transmission areas-XVI. Asembo Bay Cohort Project.";
Mol. Blochem. Parasitol. 12:83-90(2002).
EMBL. AF$40458; AAN87592.1;
SEQUENCE 396 AA; 42781 MW; 97070A9ED8D517D1 CRC64;
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MEDLINE-22356746; PubMed=12467976;
MEDLINE-22356746; PubMed=12467976;
MEDLINE-22356746; PubMed=12467976;
MESCALLAR BISMAS S., Kariuki S., Lal A.A.;
Magris M., Biswas S., Kariuki S., Lal A.A.;
"A study of genetic diversity in the gene encoding the circumsporozoite protein (CSP) of Plasmodium falciparum from different transmission areas-XVI. Asembo Bay Cohort Project.";
MOI. Biochem. Parasitol. 125:83-90(2002).

EMBL; AF540459; AAN87593.1;
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Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
NCBL_TaxID=5833;
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                                                                                   Length 392;
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Pred. No. 1.4e-05;
                                                                                                              Indels
          transmission areas-XVI. Asembo Bay Cohort Project.";
Mol. Biochem. Parasitol. 125:83-90(2002).
EMBL; AF540461; AAN87595.1; -.
SEQUENCE 392 AA; 42385 MW; 99DAAD1629801E0C CRC64;
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Last annotation update)
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Last annotation update)
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                                                                                             Pred. No. 1.4e-05;
3; Mismatches 3;
                                                                                 DB 5;
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                                                                                 Score 98;
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MEDLINE=22356746; PubMed=12467976;
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63.2%;
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63.28;
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                                                                             Query Match 53.6%
Best Local Similarity 63.2%
Matches 24; Conservative
                                                                                                                                                                                                                                                                                                         Circumsporozoite protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Circumsporozoite protein.
                                                                                                                                                                                                                                        PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    24; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Plasmodium falciparum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      396 AA;
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SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
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SMART; SM00209; TSP1; 1.
PROSITE; PS50092; TSP1; 1.
SEQUENCE 436 AA; 46688 MW; 5B42FF3348B68655 CRC64;
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                                                        Best Local Similarity 60.5
Matches 23; Conservative
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Matches 22; Conservative
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                                                                                                                                                                                                                                                           Plasmodium falciparum.
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SEQUENCE FROM N.A.
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                                               Query Match
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                                                                                                                                                                                                                                                                                                                   8; Gaps
                                                                                          Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
NCBI_TaxID=5833;
                                                                                                                                                                                                                                                                                            Length 408;
                                                                                                                                                                                                                                                                                                                   4; Indels
                                                                                                                                   STRAIN-Santa Lucia;
Qari S.H., Lal A.A.;
Qari S.H., Lal A.A.;
Submitted (FEB-1995) to the EMBL/GenBank/DDBJ databases.
EMBL; U20569; AAA63153.1; -
InterPro; IPR003067; Crcmsprzoite.
InterPro; IPR000884; TSP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN-837;
Jongwutiwes S., Tanabe K., Kanbara H.;
Submitted (MAR-1992) to the EMBL/GenBank/DDBJ databases.
EMBL; M83154; AAA2942.1; -.
EMBL; M83150; AAA29563.1; -.
EMBL; M83163; AAA29576.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            la Cruz V.F.; Submitted (MAR-1992) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                   408 AA; 43871 MW; A545BE517822515C CRC64;
                                  (TrEMBLrel. 01, Last sequence update) (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                      01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                        7 LRPGSSGPSLD-----EKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                        Score 102; DB 5;
Pred. No. 3.9e-06;
3; Mismatches 4;
 408 AA.
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                       Created)
 PRT;
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InterPro; IPR000884; TSP1.
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MEDLINE-84250215; PubMed=6204383;
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PRINTS; PR01303; CRCMSPRZOITE.
SMART; SM00209; TSP1; 1.
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PRINTS; PR01303; CRCMSPRZOITE.
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                    01-NOV-1996 (TrEMBLrel. 01, 01-NOV-1996 (TrEMBLrel. 01, 01-MAR-2003 (TrEMBLrel. 23,
                                                                                                                                                                                                                                          PROSITE; PS50092; TSP1; 1.
                                                                                                                                                                                                                                                                                        Query Match 55.74
Best Local Similarity 60.55
Matches 23; Conservative
                                                        Circumsporozoite protein.
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 PRELIMINARY;
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                                                                              Plasmodium falciparum.
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                                                                                                     NCBI_TaxID=5833;
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MEDLINE=22356746; PubMed=12467976;
Escalante A.A., Grebert H.M., Isea R., Goldman I.F., Basco L.,
Bagris M., Biswas S., Karluki S., Lal A.A.;
"A study of genetic diversity in the gene encoding the
circumsporozoite protein (CSP) of Plasmodium falciparum from different
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                   Gaps
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NCBI_TaxID=5833;
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   Length 436;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            56FBFA76D859B416 CRC64;
                                                                                 09U002;
U-MAY-2000 (TrEMBLrel. 13, Created)
01-MAR-2000 (TrEMBLrel. 13, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last sequence update)
Last annotation update)
                                                                  7 LRPGSSGPSLD-----EKKIAKMEKASSVFNVVNS 36
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Pred. No. 2.4e-06;
3; Mismatches 4;
Score 102; DB 5;
Pred. No. 4.2e-06;
3; Mismatches 4;
                                                                                                                                                                                 AA.
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59.5%;
 55.7%;
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ALIGNMENTS

PRT; 117

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0.09u.0p1 0.09t.0p0 0.09t.

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Q9TVQ0 Q9U0P9 Q9U0Q0 Q9U0Q0 Q9U0P5 Q9U0P6 Q9U0P6 Q9U0P8 Q9U0P8 Q9U0P8

lasmodium lasmodium plasmodium plasmodium

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SEQUENCE FROM N.A.

Doolan D.L., Saul A., Good M.F.;

Doolan D.L., Saul A., Good M.F.;

Medgraphically restricted hetroreneity of the Plasmodium falciparum circumsporozoite protein: relevance for vaccine development.";

Submitted (FEB-1992) to the EMBL/GenBank/DDBJ databases.

EMBL, M77205; AAA29519.2;

InterPro: IPR003067; Crcmsprzoite.

InterPro: IPR003067; Crcmsprzoite.

Pfam: PF000309; TSP1: 1.

SMART; SM00209; TSP1: 1.

SMART; SM00209; TSP1: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
NCBL_TaxID=5833;
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60.5%; Pred. No. 9.8e-07;
ive 3; Mismatches 4; Indels
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01-NOV-1996 (TrEMBLrel. 01, Created)
01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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les 23; Conservative
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SEQUENCE
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Matches
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266.163 Million cell updates/sec
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                                                                                                                                              September 24, 2003, 17:29:11; Search time 34.903 Seconds
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                   GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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1 XHWSYGLRPGSSGPSLDEKKIAKMEKASSVFNVVNS
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                                                                                                         OM protein - protein search, using sw model
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Q819J2
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Gapop 10.0 , Gapext 0.5
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sp_invertebrate:*
sp_mammal:*
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sp_bacteriap:*
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sp_bacteria:*
sp_fungi:*
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sp_phage:*
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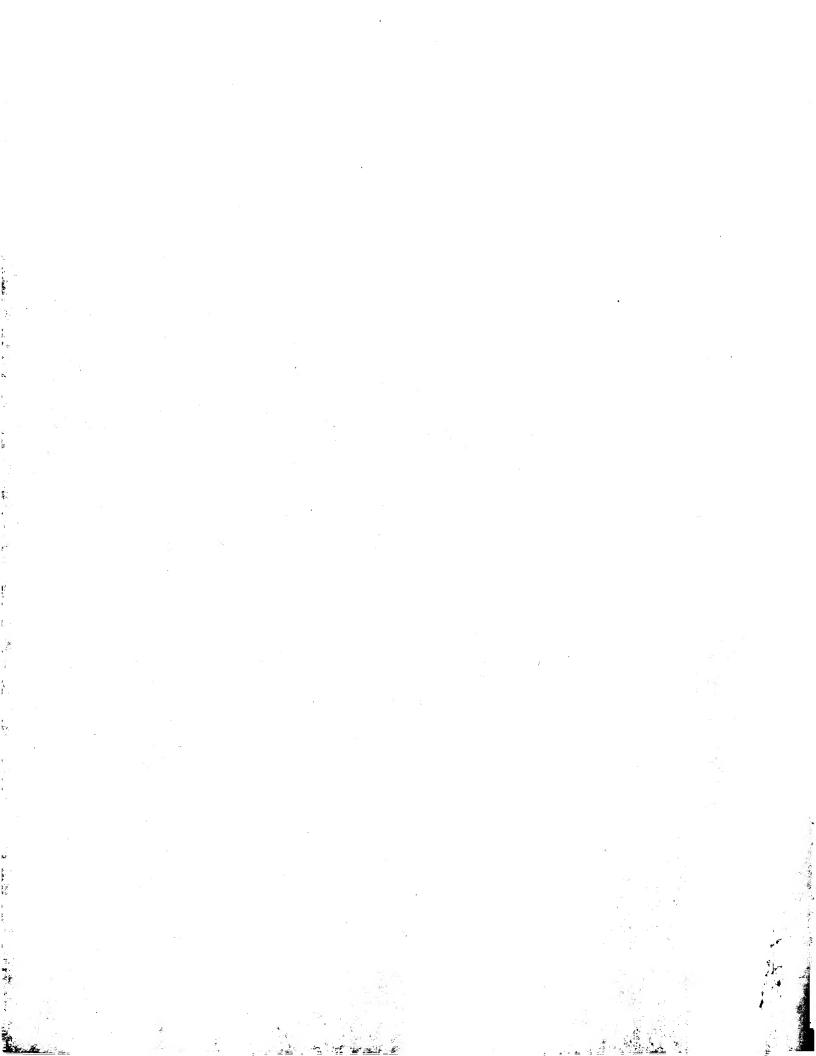
1;

Gaps

. 8

Length 117;

0DA711D86C0B03C1 CRC64;



Search completed: September 24, 2003, 17:41:20 Job time : 6.78144 secs

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Cleavage on
              Placenta;
                                                      PEPTIDE
ACT_SITE
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                                                                                                                                 SEQUENCE
                                                                                                                                                       Query Match
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                                             PEPTIDE
                                                                                       MOD_RES
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                      SIGNAL
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                                   CHAIN
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-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES
THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                         Pfam; PF00446; GnRH; 1.
PRINTS: PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus; Placenta; Signal; Pyrrolidone carboxylic acid.
23.
                                                                                                                                                                                                                                  Gaps
                                                                                                                                PROLACTIN RELEASE-INHIBITING FACTOR I. APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUBCELLULAR LOCATION: Secreted.
SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                               PYRROLIDONE CARBOXYLIC ACID.
AMIDATION (G-34 PROVIDE AMIDE GROUP).
                                                                                                                                                                                                                                                                                                                                                  15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Prognadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GRRH I) (Luliberin I); GRRH-associated peptide I].
                                                                                                                                                                                                                                                                                                                                                                                                                           Tupaia glis belangeri (Common tree shrew).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Scandentia; Tupaiidae; Tupaia.
NCBI_TaxID=9396;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Characterization of two new preproGnRH mRNAs in the tree shrew: first direct evidence for mesencephalic GnRH gene expression in placental mammal.";
                                                                                                                                                                                                                                 ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TISSUE-Hypothalamus;
MEDIINE-97079639; PubMed-8921350;
Kasten T.L., White S.A., Norton T.T., Bond C.T., Adelman J.P.,
Fernald R.D.;
                                                                                                                                                                                                         DB 1; Length 92;
0.22;
                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                     494B5C64DA8A3EB3 CRC64;
                                                                                                            PROGONADOLIBERIN I.
                                                                                                                                                                                                  92 AA.
                                                                                                                        GONADOLIBERIN
                                                                                                                                                       ACTIVITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL, U63326; AAB16837.1; -.
InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
EMBL; M15528; -; NOT_ANNOTATED_CDS. PIR; A40147; RRFRG. InterPro; IPR002012; GNH. InterPro; IPR004079; Gonadoliberini.
                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
                                                                                                                                                                                      10500 MW;
                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                   2833
2623
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                                                                                                                                                                                                                                                    2 HWSYGLRPG 10
                                                                                                                                                                                                                                                                         HWSYGLRPG 33
                                                                                                                                                                                              Query Match
Best Local Similarity
9; Conserve
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                     92 AA;
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095335;
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MOD_RES
SEQUENCE
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PEPTIDE
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GON1_TUPGB
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                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                      AMIDATION (G-34 PROVIDE AMIDE GROUP) (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MADDALD CONTINUED OF THE CTERMINAL REGION IS PROBABLY USED FOR ANCHORING THE PROTEIN TO THE CELL MEMBRANE. THE REPEAT SEQUENCES WOULD BE THE SUBRACE ANTIGEN OF THE ORGANISM.

-!- SIMILARITY: Contains 1 TSP type-1 domain.
Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                         GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-87089740; PubMed-2432395; Eichinger D.J., Arnot D.E., Tam J.P., Nussenzweig V., Enea V.; Eichinger D.J., Arnot D.E., Tam J.P., Nussenzweig V., Enea V.; Circumsporozoite protein of Plasmodium berghei: gene cloning and identification of the immunodominant epitopes."; Mol. Cell. Biol. 6:3965-3972(1986).
-!- FUNCTIN: THE CIRCUMSPORZOITE PROTEIN IS THE IMMUNODOMINANT SURFACE ANTIGEN ON THE SPORZOITE (THE INFECTIVE STAGE OF THE MALARIA PARASITE THAT IS TRANSMITTED FROM THE MOSQUITO TO THE
                                                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRÓBABLE.
CIRCUMSPOROZOITE PROTEIN.
13 x 8 AA TANDEM REPEATS.
16 x 2 AA TANDEM REPEATS OF P-Q.
TSP TYPE-1.
                                                                                                                                                                          PYRROLIDONE CARBOXYLIC ACID (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Plasmodium berghei.
Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
                                                                                                                                                                                                                                                                                                             Length 92;
                                                                                                                                                                                                                                                                                                                                                    0; Indels
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                                                                                                                                                                                                                                                               4FDBF2C58CF5F63B CRC64;
                                                                PROGONADOLIBERIN I.
                       Signal; Pyrrolidone carboxylic acid.
                                                                                                                                                                                                                                                                                                         31.7%; Score 58; DB 1; 100.0%; Pred. No. 0.22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (Rel. 06, Created)
(Rel. 06, Last sequence update)
(Rel. 41, Last annotation update)
                                                                                       GONADOLIBERIN I.
  pair of basic residues; Hormone;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          339 AA.
                                           SIMILARITY
                                                                                                                                                                                                                                                                                                                                                       Mismatches
                                                                                                                                                                                                   SIMILARITY)
                                                                                                                                                                                                                                               SIMILARITY)
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                                                                                                                                                     ACTIVITY.
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InterPro; IPR003067; Crcmsprzoite.
InterPro; IPR000884; TSPI.
                                                                                                                                                                                                                                                                                                                31.,','
100.0%; Pre-
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SM00209; TSP1; 1.
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                                                                                                                                                                                                                                                                 10197 MW;
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Malaria; Sporozoite; Repe
                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
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01-JAN-1988 (Rel. 06,
28-FEB-2003 (Rel. 41,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pfam; PF00090; tsp_1;
                                                                                                                                                                                                                                                                                                                                                                                                2 HWSYGLRPG 10
                                                                                                                                                                                                                                                                                                                                                                                                                         11111111
25 HWSYGLRPG 33
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93
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206
266
339 AA;
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                                                                                                                                                                                                                                                                                                                                Best Local Similarity
Matches 9; Conserv
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SEQUENCE FROM N.A.
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P06915;
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us-09-848-834a-16.rsp

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2 HWSYGLRPG 10
                                    GNRH1 OR GNRH
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                                                                                                RESULT 13
GON1_RAT
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                                                                                                                                                                                  'Characterization of single-nucleotide polymorphisms in coding regions
                                                                                                                                                                                                                                                                                                                                  Genet. 23:373-373(1999).
FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES
THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus; Placenta; Pharmaceutical; Signal; Polymorphism;
Pyrrolidone carboxylic acid.
SIGNAL. 1 23
                                                                                                                                                                                                                                                              Cargill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N., Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L., Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.Q.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GO: GO:0005625; C:soluble fraction; TAS.
GO: GO:0005183; F:luteinizing hormone-releasing factor activity; TAS.
GO: GO:0007267; P:cell-cell signaling; TAS.
GO: GO:0007275; P:development; TAS.
GO: GO:0008285; P:negative requiation of cell proliferation; TAS.
GO: GO:0007165; P:signal transduction; TAS.
InterPro; IPR004079; Gonadoliberini.
                                                                                             MEDLINE-99918093; PubMed-10391209;
Cargill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N.,
Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L..
Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.Q.,
                                                                                                                                                                                                                                                                                                                                                                                                  SUBCELLULAR LOCATION: Secreted.
PHARMACEUTICAL: Available under the names Factrel (Ayerst Labs),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GONADOLIBERIN I.
GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AMIDATION (G-34 PROVIDE AMIDE GROUP). W -> S (IN dbSNP:6185).
                                                                                                                                                                                                                                                                                                                                                                                                                                      Lutrepulse or Lutrelef (Ferring Pharmaceuticals) and Relisorm
               "The chemical identity of the immunoreactive LHRH-like peptide biosynthesized in the human placenta:"; Blochem. Blophys. Res. Commun. 109:1061-1071(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1; Length 92; 0.22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PYRROLIDONE CARBOXYLIC ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30A72221B076FA79 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /FTId=VAR_013943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 58; DB 1; Pred. No. 0.22 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -!- SIMILARITY: Belongs to the GNRH family.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       31.7%;
100.0%;
                                                                                                                                                                                                               Nat. Genet. 22:231-238(1999).
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Genew; HGNC:4419; GNRH1.
MIM; 152760; -.
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 Rousseau P.;
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                                                                                                                                                                                                   human genes.
                                                                                                                                                                                                                                                                                                                    Lander E.S.;
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ACT_SITE
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MOD_RES
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between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its modified and this statement is not removed. Usage by an on-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                             01-APR-1988 (Rel. 07, Created)
01-APR-1988 (Rel. 07, Last sequence update)
28 FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GNRH I) (Luliberin I); Prolactin release-inhibiting factor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
MEDLINE-86094338; PubMed=2867548;
AdeLman J.P., Mason A.J., Hayflick J.S., Seeburg P.H.;
"Isolation of the gene and hypothalamic cDNA for the common precursor of gonaddrropin-releasing hormone and prolactin release-inhibiting factor in human and rat.";
                                                                                                                                                                                                                                                                                                                                        Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
NCBI_TaxID=10116;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Adelman J.P., Bond C.T., Douglass J., Herbert E.; "Two mammalian genes transcribed from opposite strands of the same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-89384661; PubMed-2476669;
Bond C.T., Hayflick J.S., Seeburg P.H., Adelman J.P.;
The rat gonadotropin-releasing hormone: SH locus: structure and
hypothalamic expression.";
Mol. Endocrinol. 3:1257-1262(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-Thymus;
MEDLINE-93105480; PubMed=1468115;
Maier C.C., Marchetti B., Leboeuf R.D., Blalock J.E.;
Minocytes express a mRNA that is identical to hypothalamic
lutehinizing hormone-releasing hormone mRNA.";
Cell. Mol. Neurobiol. 12:447-454(1992).
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-!- TISSUE SPECIFICITY: CENTRAL NERVOUS SYSTEM.
-!- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Proc. Natl. Acad. Sci. U.S.A. 83:179-183(1986).
92 AA
   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   M31670; AAA41264.1; -.
M15527; AAA42141.1; ALT_SEQ.
M15529; AAA42139.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=87149087; PubMed=3547652;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 1-47 FROM N.A.
   STANDARD;
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EMBL;
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"On the tryptophan residue in porcine LH and FSH-releasing hormone.";
Blochem. Blophys. Res. Commun. 45:483-487(1971).
-I- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES
THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                         residues; Hormone; Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-72065376; Pubmed-4942726;
Matsuo H., Arimura A., Nair R.M.G., Schally A.V.;
"Synthesis of the porcine LH- and FSH-releasing hormone by the solid-
phase mathod"
                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                        PROLACTIN RELEASE-INHIBITING FACTOR I. APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                          (G-32 PROVIDE AMIDE GROUP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-0CT-1996 (Rel. 34, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
[Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GRH I) (Lutiberin I); GRRH-associated peptide I].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Baba Y., Matsuo H., Schally A.V.;
"Structure of the porcine LH- and FSH-releasing hormone. II.
Confirmation of the proposed structure by conventional sequential
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalla; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
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                                                                                                                                                                                                   PYRROLIDONE CARBOXYLIC ACID AMIDATION (G-32 PROVIDE AMII
                                                                                                                                                                                                                                                                                Score 58; DB 1; Length 90;
Pred. No. 0.22;
                                                                                                                                                                                                                                                                                                                          0; Indels
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Submitted (MAY-1994) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                          1C0766FA4826E4D9 CRC64;
                                                                                                  PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Biochem. Biophys. Res. Commun. 44:459-463(1971).
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                    PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; A
Placenta; Signal; Pyrrolidone carboxylic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      91 AA.
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                                                                                                                                                                                                                                                                                                                        0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE=72117544; PubMed=4946275;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-OCT-1996 (Rel. 34, Created)
  PR01541; GONADOLIBRNI.
                                                                                                                                                                                                                                        10337 MW;
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90
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Matches 9; Conserv
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                                                                                                                                                                                                                                          90 AA;
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P49921;
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SEQUENCE
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PEPTIDE
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human gonadotropin-releasing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Adelman J.P., Mason A.J., Hayflick J.S., Seeburg P.H.; "Isolation of the gene and hypothalamic cDNA for the common precursor of gonadotropin-releasing hormone and prolactin release-inhibiting factor in human and rat.";
                                                                                                                                                                                                                                                PRINTS; PR01541; GONADOLIBRNI.
PR051TE; PS00473; GNRH; 1.
Cleavage on pair of Prosit cresidues; Hormone; Amidation; Hypothalamus;
Placenta; Signal; Pyrrolidone carboxylic acid.
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                                                                                                                                                                                                                                                                                                                                                                                                     GONADOLIBERIN I.
GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ACTIVITY.
PYRROLIDONE CARBOXYLIC ACID.
AMIDATION (G-34 PROVIDE AMIDE GROUP).
8340474F32DDAA99 CRG64,
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28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
Fulliating hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GnRH I) (Luliberin I) (Gonadorelin); GnRH-associated peptide I].
GNRH OR LHRH.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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0.22;
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Hayflick J.S., Adelman J.P., Seeburg P.H.
"The complete nucleotide sequence of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                8
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MEDLINE-85012739; Pubmed-6090951;
Seeburg P.H., Adelman J.P.;
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                                                                                                                                                  EMBL; L32864; AAA31066.1; -.
InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
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100.0%; Pre
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Nature 311:666-668(1984).
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Matches 9; Conserv
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P13562;
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use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                        SIMILARITY).
AMIDATION (G-16 PROVIDE AMIDE GROUP) (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-NOV-1995 (Rel. 32, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Gonadoliberin I precursor (Gonadotropin-releasing hormone I) (GnRH-I)
                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                              GONADOLIBERIN I.
GORH ASSOCIATED PEPTIDE I.
APPERRS TO BE ESSENTIAL FOR BIOLOGICAL
ACTIVITY (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (LH-RH) (Luliberin I).
Stanopus laevis (African clawed frog).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
                                                                                                                                                                                                                                                                                                                                   ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Hayes W.P., Wray S., Battey J.F.; "The frog gonedotropin-releasing hormone-I (GnRH-I) gene has a mammalian-like expression pattern and conserved domains in GnRH-associated peptide, but brain onset is delayed until
                                                                                                                                                                                                                                      PYRROLIDONE CARBOXYLIC ACID (BY
                                                                                                                                                                                                                                                                                                              Score 58; DB 1; Length 67; Pred. No. 0.16;
                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Endocrinology 134:1835-1844(1994).
-! FUNCTION: Stimulates the secretion of gonadotropins.
-! SUBCELLULAR LOCATION: Screted.
-! SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                          505394DAA261A3F2 CRC64;
                                                                                                                                                                                                                                                                                                                                   ;
                                                                                                                                                                           BY SIMILARITY.
PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                            89 AA.
                                                                                                                                                                                                                                                                                                                                 0; Mismatches
                                                                                                                                                                                                                                                                      SIMILARITY).
                                                                           EMBLI 198541; 178541.
InterPro; IPR002012; GnRH.
TnterPro; IPR004079; GonadoliberinI.
                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TISSUE=Forebrain;
MEDLINE=94185563; PubMed=8137750;
                                                                                                                                                                                                                                                                                                                                                                                                                                               01-NOV-1995 (Rel. 32, Created)
                                                                                                                                                                                                                                                                                                                        100.08;
                                                                      EMBL; S75918; AAB33096.1; -.
                                                                                                                                                                                                                                                                                                              31.78;
                                                                                                                                                                                                                                                                                         7573 MW;
                                                                                                                                                                                                                                                                                                                       Local Similarity 100 nes 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                   >67
15
>67
                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                           15
                                                                                                             Pfam; PF00446; GnRH; 1
                                                                                                                                                                                                                                                                                                                                                      2 HWSYGLRPG 10
                                                                                                                                                                                                                                                                                                                                                                  HWSYGLRPG 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                         67 AA;
                                                                                                                                                                                                                                      9
                                                                                                                                                                                                                                                           15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                               67
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     metamorphosis.";
                                                                                                                                                                                                                                                                                                                                                                                                                          GON1_XENLA
P45656;
                                                                                                                                                                                                        PEPTIDE
ACT_SITE
                                                                                                                                                                                                                                                                                          SEQUENCE
                                                                                                                                                                                                                                                                                                             Query Match
                                                                                                                                                                                               PEPTIDE
                                                                                                                                                                                                                                        MOD_RES
                                                                                                                                                                                                                                                           MOD_RES
                                                                                                                                                                                                                                                                               NON_TER
                                                                                                                                                                                     CHAIN
                                                                                                                                                                                                                                                                                                                         Best Loca
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                  GON1_XENLA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MEDLINE-87069928; PubMed=3024317; Mason A.J., Hayflick J.S., Zoeller R.T., Young W.S. III, Mason A.J., Hayflick J.S., Zoeller R.T., Young W.S. III, Phillips H.S., Nikolics K., Seeburg P.H.; Releasing hormone gene is responsible for hypogonadism in the hpg mouse."; Science 224:1366-1371(1986).
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-JAN-1990 (Rel. 13, Created)
01-JAN-1990 (Rel. 13, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Lutelnizing hormone-releasing hormone I) (Gonadotropin-releasing
hormone I) (GRH I) (Luliberin I); Prolactin release-inhibiting factor
                                                                                                                                                                                                                                                                                                                                          GONADOTROPIN-RELEASING HORMONE ASSOCIATED
                                                                                                                                                                                                 Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus; Signal; Pyrrolidone carboxylic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                    PYRROLIDONE CARBOXYLIC ACID.
AMIDATION (G-34 PROVIDE AMIDE GROUP).
6F4F36FBAE0D4284 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   .;
                                                                                                                                                                                                                                                                                                                                                                                                  GNRH-ASSOCIATED PEPTIDE I (GAP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 58; DB 1; Length 89; Pred. No. 0.22;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                   PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                GONADOLIBERIN I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          31.7%; Score ... 0.2.
100.0%; Pred. No. 0.2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -!- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                        PEPTIDE
                       PIR; 151423; 151423.
InterPro; IPR002012; GnRH.
InterPro: IPR004079; Gonadoliberinl.
Pfam; PF00446; GnRH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MGD; MGI:95789; Garh.
InterPro; IPR002012; GnRH.
InterPro: IPR004079; GonadoliberinI.
Pfam; PF00446; GnRH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUBCELLULAR LOCATION: Secreted
                                                                                                                                         PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
                                                                                                                                                                                                                                                                                                                                                                                            85
24
33
10246 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; M14872; AAA37717.1; -.
EMBL; L28040; AAA49728.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity 100.00-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                        23
89
89
89
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                25 HWSYGLRPG 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 HWSYGLRPG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 89 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NCBI_TaxID=10090;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'n
"Primary structure of the ovine hypothalamic luteinizing hormonereleasing factor (LRF) (LH-hypothalamus-LRF-gas chromatography-mass spectrometry-decapeptide-Edman degradation)."; Proc. Natl. Acad. Sci. U.S.A. 69:278-282(1972).
Proc. PONCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Jansen H.T., Stevens P.J., Zeitler P., Lehman M.N.;
Submitted (MAR-1997) to the EMBL/GenBank/DDBJ datebases.
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES
- THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GONADOLIBERIN I.
GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PYRROLIDONE CARBOXYLIC ACID.
AMIDATION (G-11 PROVIDE AMIDE GROUP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        15-DEC-1998 (Rel. 37, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing
hormone I) (GnRH I) (Luliberin I); GRH-associated peptide I]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Cricetinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 61.5; DB 1; Length 61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          63962A1AE319B8F0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2 HWSYGLRPGSSGPSLDEKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. 0.044;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               63 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUBCELLULAR LOCATION: Secreted.
SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                     LOCATION: Secreted. Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mesocricetus auratus (Golden hamster).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Placenta; Pyrrolidone carboxylic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
Pfam; PF00446; GnRH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          6828 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; U02517; AAA03433.1;
                                                                                                                                                                                                                     SUBCELLULAR LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity 42.9
nes 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          >61
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GON1_MESAU
009163;
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PEPTIDE
ACT_SITE
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NON_TER
SEQUENCE
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   RRTHREAD DOWN KENNER REPAIR OF THE REPAIR RE
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                                                                                                                                                                                                                      PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                            SIMILARITY).
AMIDATION (G-11 PROVIDE AMIDE GROUP) (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                      APPEARS TO BE ESSENTIAL FOR BIOLOGICAL ACTIVITY (BY SIMILARITY).
PYRROLIDONE CARBOXYLIC ACID (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TISSUE-Hypothalamus;
MEDLINE-95124501; PubMed-7545971;
MEDLINE-95124501; PubMed S.R.;
MA Y.J., Costa M.E., Ojeda S.R.;
"Developmental expression of the genes encoding transforming growth factor alpha and its receptor in the hypothalamus of female rhesus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-0CT-1996 (Rel. 34, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
28-FCB-2003 (Rel. 11, Charlessing hormone I) (Gonadotropin-releasing hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .;
                                                                                                                                                                                                                                                                                                       GONADOLIBERIN I.
GNRH-ASSOCIATED PEPTIDE I (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 59; DB 1; Length 63; Pred. No. 0.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FC94995676F77180 CRC64;
                                                                                                                                                                                                                                                                                         PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              67 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY).
                                                                                                                                                                                                                                                                                                                                          SIMILARITY).
                                                                                                                                                                                                                                                         Placenta; Pyrrolidone carboxylic acid.
                                                                                                                                                 InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
Pfam; PF00446; GnRH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               2 HWSYGLRPGSS-----GPSLDE 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              2 HWSYGLRPGGKRNAERLGDSFQE 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Neuroendocrinology 60:346-359(1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUBCELLULAR LOCATION: Secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Macaca mulatta (Rhesus macaque).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Rel. 34, Created)
                                                                                                                                                                                                     PRINTS; PR01541; GONADOLIBRNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32.2%;
52.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              7370 MW;
                                                                                                                                    EMBL; U91938; AAB51302.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12; Conservative
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10
>63
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GNRH1 OR GNRH OR LHRH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              63 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=9544;
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PEPTIDE
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MEDLINE=87115616; PubMed=3543671;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GON1_SHEEP
Q28588;
                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                     Local
                                                                                                                                                                                                                                                                                                                                                                    SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                            DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
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                                                                                                                                                                                                                                                                                                                                                                   use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                         VERTEBRATE HOST).

MISCELLANDOUS: THE C-TERMINAL REGION IS PROBABLY USED FOR ANCHORING THE PROTEIN TO THE CELL MEMBRANE. THE REPEAT SEQUENCES WOULD BE THE SURFACE ANTIGEN OF THE ORGANISM.
                                                                                                                                                                                                            Mol. Blochem. Parasitol. 24:289-294(1987).
-1- FUNCTION: THE CIRCUMSPORGOTTE PROTEIN IS THE IMMUNODOMINANT
SURFACE ANTIGEN ON THE SPORGZOITE (THE INFECTIVE STAGE OF THE
MALARIA PARASITE THAT IS TRANSMITTED FROM THE MOSQUITO TO THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CIRCUMSPOROZOITE PROTEIN.
45 X 4 AA TANDEM REPEATS OF N-A-N-P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ..
8
                                                                                                                                                                          del Portillo H.A., Nussenzweig R.S., Enea V.; "Circumsporozoite gene of a Plasmodium falciparum strain from
                                                                                         Circumsporozoite protein precursor (CS).
Plasmodium falciparum (isolate t4 / Thailand).
Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
NCBI_TaxID=5848;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 424;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            49.7%; Score 91; DB 1; Length 424
55.3%; Pred. No. 2.2e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TSP TYPE-1.
710AB14238786CD9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       7 LRPGSSGPSLD-----EKKIAKMEKASSVFNVVNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-AUG-1988 (Rel. 08, Last Sequence update)
28-FBB-2003 (Rel. 41, Last annotation update)
21-Cummsporczolite protein precursor (CS).
Plasmodium falciparum (isolate Wellcome).
                                                                    01-JAN-1990 (Rel. 13, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                        SIMILARITY: Contains 1 TSP type-1 domain.
                                  424 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       442 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROBABLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PRO1303; CRCMSPRZOITE.
SMART; SM00209; TSP1; 1.
PROSITE; PS50092; TSP1; 1.
Malaria; Sporozoite; Repeat; Signal
                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                     PIR; A54533, A54533.
InterPro, IPR003067; Crcmsprzoite.
InterPro, IPR000884; TSP1.
                                                                                                                                                    SEQUENCE FROM N.A. MEDLINE=87315205; Pubmed=3306373;
                                                       01-JAN-1990 (Rel. 13, Created)
01-JAN-1990 (Rel. 13, Last seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-AUG-1988 (Rel. 08, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        123 300 4
349 402 T
424 AA; 45610 MW;
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                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
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300
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF00090; tsp_1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                             NCBI_TaxID=5846;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CSP_PLAFW
P08307;
                                  CSP_PLAFT
                                                                                                                                                                                                  Thailand.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
                                             P13814;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIGNAL
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         RESULT 4
CSP_PLAFT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1;
Lockyer M.J., Schwarz R.T.; "Strain variation in the circumsporozoite protein gene of Plasmodium "Strain variation in the circumsporozoite protein gene of Plasmodium Mol. Biochem."; Parasitol. 22:101-108(1987).
                                                                                                                                                                                                                                                                             THE REPEAT SEQUENCES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Ovis aries (Sheep).
Sukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Caprinae; Ovis.
                                                                                                           FOULT BIOCHEM: FAIGUSING ASSETS: 100(1507).
-!- FUNDTION: THE CIRCUMSPONOZOITE PROTEIN IS THE IMMUNODOMINANT SURFACE ANTIGEN ON THE SPONOZOITE (THE INFECTIVE STAGE OF THE MALARIA PARASITE THAT IS TRANSMITTED FROM THE MOSQUITO TO THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      15-DEC-1998 (Rel. 37, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
28-FEB-2003 (Rel. 41, Last annotation update)
28-FEB-2003 (Rel. 41, Last annotation update)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       47 X 4 AA TANDEM REPEATS OF N-A-N-P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Burgus R., Butcher M., Amoss M., Ling N., Monahan M., Rivier J., Fellows R., Blackwell R., Vale W., Guillemin R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      8;
                                                                                                                                                                                                                                          MISCELLANDOUS: THE C-TERMINAL REGION IS PROBABLY USED FOR ANCHORING THE PROTEIN TO THE CELL MEMBRANE, THE REPEAT SEGWOULD BE THE SURFACE ANTIGEN OF THE ORGANISM.
SIMILARITY: Contains 1 TSP type-1 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 442;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TSP TYPE-1.
BD57A9A152B85E03 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CIRCUMSPOROZOITE PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7 LRPGSSGPSLD-----EKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      49.2%; Score 90; DB 1; I 55.3%; Pred. No. 3.2e-05; tive 3; Mismatches 6;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIR; A54529; A54529.
InterPro; IPR003067; Crcmsprzoite.
InterPro; IPR000884; TSP1.
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MEDLINE=72094314; PubMed=4550508;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15-DEC-1998 (Rel. 37, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CRCMSPRZOITE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                47402 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; M15505; AAA29554.1; -.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
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PRINTS; PR01303; CRCMSPR.
SMART; SM00209; TSP1; 1.
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GNRH1 OR GNRH OR LHRH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17 4
130 3
367 4
442 AA;
                                                                                                                                                                                                                    VERTEBRATE HOST)
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DOMAIN
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                                                                 Matches
                                                                                                                                                    CSP_PLAFA
                                                                                                                                            RESULT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       between the Swiss Institute of Bioinformatics and the EMBL outstation -
the European Bioinformatics Institute. There are no restrictions on its
use by non-profit institutions as long as its content is in no way
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration
                                                                                                                                                                                                                                                                                                                                                                                                      MISCELLANDOUS: THE C-TERMINAL REGION IS PROBABLY USED FOR ANCHORING THE PROTEIN TO THE CELL MEMBRANE. THE REPEAT SEQUENCES WOULD BE THE SURFACE ANTIGEN OF THE ORGANISM.
SIMILARITY: Contains 1 TSP type-1 domain.
                                                                                                                                                                                                                                                                                                       MEDLINE-92155298; PubMed=1346766; Davis J.R., Cortese J.F., Herrington D.A., Murphy J.R., Clyde D.F., Thomas A.W., Baqar S., Cochran M.A., Thanassi J., Levine M.M., Hackett C.S.; Thasmodium fall-ciparum: in vitro characterization and human infectivity of a cloned line ", Exp. Parasitol. 74:159-168(1992).
                                                                                                                                                                                                      "DNA sequence of the gene encoding a Plasmodium falciparum malaria candidate vaccine antigen.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CIRCUMSPOROZOITE PROTEIN.
43 X 4 AA TANDEM REPEATS OF N-A-N-P.
                                                                                                                                        Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
                                                                                                                                                                                                                                                              Campbell J.R.;
Submitted (JUL-1997) to the EMBL/GenBank/DDBJ databases
CSP_PLAFO
CSP_PLAFO
P19597; Q25798;
01-FBB-1991 (Feb. 17, Created)
01-FBB-1991 (Feb. 39, Last sequence update)
28-FEB-2003 (Rel. 39, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Circumsporozoite protein precursor (CS)
Plasmodium falciparum (isolate NFSA).
                                                                                                                                                                                                                              Nucleic Acids Res. 17:5854-5854(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROBABLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PIR, S05428; S05428.
InterPro; IPR003067; Cromsprzoite.
InterPro; IPR000884; TSP1.
                                                                                                                                                                                    MEDLINE=89345189; PubMed=2668895;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam; PF00090; tsp_1; 1.
PRINTS; PR01303; CRCMSPRZOITE.
SMART; SM00209; TSP1; 1.
PROSITE; PS50092; TSP1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Malaria; Sporozoite; Repeat;
SIGNAL 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; X15363; CAA33421.1; -. EMBL; M83886; AAA29521.1; -. EMBL; M22982; AAA29527.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                VERTEBRATE HOST)
                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                   NCBI_TaxID=5843;
                                                                                                                                                                                              Campbell J.R.;
                                                                                                                                                                                                                                                    REVISIONS.
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                                         RESULT 2
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                                                                                                                                                 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Dame J.B., Williams J.L., Mcutchan T.F., Weber J.L., Wirtz R.A.,
Hochmeyer W.T., Maloy W.L., Haynes J.D., Schneider I., Roberts D.,
Sanders G.S., Reddy E.P., Diggs C.L., Miller L.H.;
Structure of the gene encoding the immunodominant surface antigen on
the sporozoite of the human malaria parasite Plasmodium falciparum.";
Science 225:593-599(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -!- MISCELLANEOUS: THE C-TERMINAL REGION IS PROBABLY USED FOR ANCHORING THE PROTEIN TO THE CELL MEMBERANE. THE REPEAT SEQUENCES WOULD BE THE SURRACE ANTICEN OF THE ORGANISM.
-!- SIMILARITY: Contains 1 TSP type-1 domain.
                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -!- FUNCTION: THE CIRCUMSPOROZOITE PROTEIN IS THE IMMUNODOMINANT SURFACE ANTIGEN ON THE SPOROZOITE (THE INFECTIVE STAGE OF THE MALARIA PARASITE THAT IS TRANSMITTED FROM THE MOSQUITO TO THE VERTEBRATE HOST).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRÓBABLE.
CIRCUMSPOROZOITE PROTEIN.
11 X 4 AA TANDEM REPEATS OF P-N-A-N.
1SP TYPE-1.
                                                                                                                                                 .;
8
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6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
                                                                                               Length 397;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 412;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 91; DB 1; Length 412
Pred. No. 2.1e-05;
                                                                                                                                                 6; Indels
                            4
                       -> ANPNANPNA (IN REF. 4 9E81146F59EBCEA3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1EEEED3DE90965F8 CRC64;
                                                                                                                                                                                                                            346 IKPGSANKPKDELDYANDIEKKICKMEKCSSVFNVVNS 383
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7 LRPGSSGPSLD-----EKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                  7 LRPGSSGPSLD-----EKKIAKMEKASSVFNVVNS
                                                                                          Score 91; DB 1;
Pred. No. 2e-05;
3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                            21-JUL-1986 (Rel. 01, Last sequence update) 28-FEB-2003 (Rel. 41, Last annotation update) Circumsporozoite protein precursor (CS).
                                                                                                                                                                                                                                                                                                                                                                           AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     3; Mismatches
  TSP TYPE-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS50092; TSP1; 1.
Malaria; Sporozoite; Repeat; Signal.
STGNAI, 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     InterPro; IPR003067; Crcmsprzoite. InterPro; IPR000884; TSP1. InterPro; PR000984; TSP1. PR1MTS; PR01303; CRCMSPRZOITE. SMART; SM00209; TSP1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
MEDLINE-84250215; PubMed-6204383;
                                                                                                                                                                                                                                                                                                                                                                                                                       21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequ
28-FEB-2003 (Rel. 41, Last ann
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         337 390 T
412 AA; 44420 MW;
322 375 T
194 194 A
397 AA; 42646 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    49.78;
                                                                                               49.7%;
55.3%;
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                                                                                                                                                 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Plasmodium falciparum.
                                                                                                                       Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=5833;
                                                                                                                                                                                                                                                                                                                                                                      CSP_PLAFA P02893;
                       CONFLICT
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Best Local S:
Matches 21,
                                                                                               Query Match
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P51921 P51923 Q08393 Q01au2 Q08863 Q07YJ8 P45740 Q28C94 Q28C98 P25526 O54713

MSH1_YEAST GGON3_PAGMA GON3_SPAAU GTA2_CHICK GON8_RANDY GTA1_RABIT THC1_BACHD THIC_BACHD RRB1_CANFA GABD_ECOLI GON1_CAVPO

959 900 222 222 222 233 483 482 92

227.9 227.6 227.6 227.3 227.3 26.0 26.0

444 443 443 443 443 443 443 443 443

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September 24, 2003, 17:00:31 ; Search time 6.68144 Seconds
(without alignments)
253.383 Million cell updates/sec
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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183
1 XHWSYGLRPGSSGPSLDEKKIAKMEKASSVFNVVNS 36
                                                                                                                                                                                                                                                                                                                                                                                       Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                  127863 seqs, 47026705 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                 OM protein - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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Maximum DB seq length: 200000000
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                                                                                                                                                                                                       Title:
Perfect score:
                                                                                                                                                                                                                                                                                          Scoring table:
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

		Description			P02893 plasmodium		P08307 plasmodium	Q28588 ovis aries	009163 mesocricetu	P55247 macaca mula	P45656 xenopus lae	P13562 mus musculu	P49921 sus scrofa	P01148 homo sapien		Q95335 tupaia qlis										P45652 haplochromi		073812 morone saxa	P70074 pagrus majo	P51919 sparus aura	Q9ia10 dicentrarch	_	mycoplas	P14593 plasmodium	P13815 plasmodium	
SUMMARIES		ΩI	CSP_PLARE	CSP_PLAFO	CSP_PLAFA	CSP_PLAFT	CSP_PLAFW	GON1_SHEEP	GON1_MESAU	GON1_MACMU	GON1_XENLA	GON1_MOUSE	GON1_PIG	GON1_HUMAN	GON1_RAT	GON1_TUPGB	CSP_PLABE	CSP_PLABA	GON3_DICLA	GON3_PORNO	GON1_HAPBU	CSP_PLAYO	THIC_SHEON	GON1_ALLMI	GON1_CHICK	GON3_HAPBU	MMSA_BACSU	GON1_MORSA	GON1_PAGMA	GON1_SPAAU	GON1_DICLA	GON1_CLAGA	TIG_MYCGE	CSP_PLABR	CSP_PLAMA	
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di	Query	Match	53.0	49.7	49.7	49.7	49.2	33.6	32.2	31.7	31.7	31.7	31.7	31.7	31.7	31.7	31.7	31.7	30.9	30.3	30.1	30.1	30.1	29.2	29.5	29.5	28.7	28.4	28.4	28.4	28.4	28.1	28.1	27.9	27.9	
		Score	46	91	91	91	90	61.5	59	28	28	28	28	28	28	28	28	28	56.5	55.5	22	52	52	54	54	53.5	52.5	52	52	52	25	51.5	51.5	51	21	
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7 LRPGSSGPSLD------EKKIAKMEKASSVFNVVNS 36

ALIGNMENTS	RESULT 1 CSP_PLARE STANDARD; PRT; 388 AA. AC P26694; DT 01-AUG-1992 (Rel. 23, Created) DT 01-AUG-1992 (Rel. 24, Last sequence update) DT 28-FEB-2003 (Rel. 41, Last annotation update) DE CIrcumsporozoite protein precursor (CS). OS Plasmodium reichenowi. OS Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.	(1) SEQUENT SECTION SE	This SWISS-PROT ent between the Swiss the European Bioinf use by non-profit modified and this sentities requires a or send an email to		Query Match 53.0%; Score 97; DB 1; Length 388; Best Local Similarity 57.9%; Pred. No. 2.7e-06; Matches 22; Conservative 3; Mismatches 5; Indels 8; Gaps 1;
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ADDRESSEE: Morgan & Finnegan, L.L.P. STREET: 345 Park Avenue CITY: New York
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REGISTRATION NUMBER: 29,323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STATE: NY
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                                                                                                                                    Gaps
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                                                                                            45.6%; Score 113; DB 4; Length 27; 82.1%; Pred. No. 1.6e-08; Live 1; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 44.4%; Score 110; DB 3; Length 31; 78.6%; Pred. No. 4.8e-08;
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                                                                                                                                                                                                                                                                                US-00-100-414B-55
Sequence 55, Application US/09100414B
PATENT NO. 6025468
SENERAL INFORMATION:
APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: INMUNCENS
NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
ADDRESSEE: Morgan & Finnegan, L.L.P.
STREET: 345 Park Avenue
CITY: New York
                                                                                                                                                                      19 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 46
                                                                                                                                                                                        19 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 46
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Sequence 55, Application US/09303323
Patent No. 6228987
GENERAL INFORMATION:
APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: NOVEL LHRH PEPTIDE
TITLE OF INVENTION: IMMINGENS
NUMBER OF SEQUENCES: 106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC Windows
SOFTWARE: Word 97
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/100,414B
FILING DATE: 20-JUNE-1998
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ATTORNEY/AGENT INFORMATION:
NAME: MATIA H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/POCKET NUMBER: 1151-4157
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
TELEPRAX: 212-751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: New York
STATE: NY
COUNTRY: USA
ZIP: 10154-0054
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       INFORMATION FOR SEQ ID NO: 55:
SEQUENCE CHARACTERISTICS:
                                                                                        Query Match
Best Local Similarity 82.1:
Matches 23; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   31 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity 78.6
Matches 22; Conservative
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear
MOLECULE TYPE: peptide
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3Y: linear
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                                                        US-09-770-014-43
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Pred. No. 4.8e-08;
1; Mismatches 5; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: NOVEL LHRH PEPTIDE
TITLE OF INVENTION: IMMUNGENS
NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: Morgan & Finnegan, L.L.P. STREET: 345 Park Avenue CITY: New York
                                                                                                                                           CURRENT ADDICATION DATA:
APPLICATION NUMBER: US/09/303,323
FILING DATE: 30-APR-1999
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/100,414
FILING DATE: 20-JUNE-1998
ATTORNEY AGENT INFORMATION:
NAME: Maria H. Lin
REGISTRATION NUMBER: 1151-4157
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
                                                                                                                                                                                                                                                                                                                                                                 1151-4157
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/770,014
COUNTRY: USA
ZIP: 10154-0054
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC Windows
SOFTWARE: Word 97
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 15
US-09-770-014-55
Sequence 55, Application US/09770014
Patent No. 6555282
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APPLICATION NUMBER: 09/100,414
FILING DATE: 20-JUNE-1998
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COUNTRY: USA
ZIP: 10154-0054
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATINE
OPERATING SYSTEM: PC Windows
                                                                                                                                                                                                                                                                                                                                                                                                                                               INFORMATION FOR SEQ ID NO: 55:
SEQUENCE CHARACTERISTICS:
LENGTH: 31 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           44.48;
78.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
Best Local Similarity 78.6'
Matches 22; Conservative
                                                                                                                                                                                                                                                                                                                                                                                            TELEPHONE: 212 / CT TELEPHONE: 212-751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TOPOLOGY: linear

MOLECULE TYPE: peptide

US-09-303-323-55
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Gaps
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Pred. No. 1.6e-08;
1; Mismatches 2; Indels
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Patent No. 6559282
GENERAL INFORMATION:
APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: NOVEL LHRH PEPTIDE
TITLE OF INVENTION: NOVEL LHRH PEPTIDE
CORRESPONDENCE ADDRESS:
ADDRESSEE: ADDR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 46
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                                                                               SOFTWARE: Word 97
CURREW APPLICATION DATA:
APPLICATION NUMBER: US/09/303,323
FILING DATE: 30-APR-1999
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/770,014
                                                                                                                                                                                          CLASSIPCATION:
PRIOR APPLICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/100,414
FILING DATE: 20-JUNE-1998
ATTORNEY,AGENT INFORMATION:
NAME: MARIA H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-415
TELEPHONE: 212-758-4800
TELEPHONE: 212-758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION UNMER: 09/100,414
FILING DATE: 20-JUNE-1998
ATTORNEY/AGBNT INFORMATION:
NAME: Maria H. Lin
REGISTRATION NUMBER: 29,323
                             COMPUTER: IBM PC compatible OPERATING SYSTEM: PC Windows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PC Windows
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COMPUTER: IBM PC compatible
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TELEPHONE: 212-758-4800
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82.1%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 212-751-6849
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TELEFAX: 212-751-6849
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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Matches 23; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         27 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: USA
ZIP: 10154-0054
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New York
  MEDIUM TYPE:
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US-09-770-014-43
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     Gaps
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  5;
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Pred. No. 1.6e-08;
1; Mismatches 2; Indels
  Indels
  5;
0; Mismatches
                                                                                                                                                                                                                                            Sequence 43, Application US/09100414B
Patent No. 6025468
GENERAL INFORMATION:
TITLE OF INVENTION: IMMUNOGEN
TITLE OF INVENTION: IMMUNOGENS
NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
ADDRESSEE MORGAN & Finnegan, L.L.P.
STREET: 345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1; Mismatches
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Patent No. 6228987
GENERAL INFORMATION:
APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: NOVEL LHRH PEPTIDE
TITLE OF INVENTION: IMMUNOGENS
MUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Morgan & Finnegan, L.L.P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COUNTRY. USA
ZIP: 10154-0054
COUNTRY. 1054-0054
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC Windows
SOFTWARE: Word 97
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/100,414B
FILING DATE: 20-JUNE-1998
CLASSIFTCATION: 424
ATTORNEY AGENT INFORMATION:
NAME: MAIA H. LIN
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-4157
TELECOMMUNICATION INFORMATION:
TELEFAX: 212-751-6849
INFORMATION FOR SEQ ID NO: 43:
SEQUENCE CHARACTERISTICS:
                                                        19 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 46
                                                                                     19 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 345 Park Avenue CITY: New York
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82.1%;
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Best Local Similarity 82.1:
Matches 23; Conservative
24; Conservative
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ZIP: 10154-0054
COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        amino acid
3Y: linear
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US-09-100-414B-43
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Matches
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Gaps 5

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TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
NUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                     Length 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 45;
                                                                                                                                                                                                                             2; Indels
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COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: IBM PC compatible

COMPUTER: IBM PC compatible

COMPUTER: APELICATION DATA:

APPLICATION NUMBER: US/08/488,351A

FILING DATE: 7-UUN-1995

CLASSIFICATION: 424

PRIOR APPLICATION DATA:
                                                                                                                                                                                Score 116; DB 1;
Pred. No. 1.2e-08;
0; Mismatches 2
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Pred. No. 1.2e-08;
                                                                                                                                                                                                                                                                                             19 LSEIKGVIVHRLEGVGGE--HWSYGLRP 44
                                                                                                                                                                                                                                                                    19 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 46
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FILING DATE: 7-50N-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/229,275
FILING DATE: 14-APR-1994
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                            US-08-468-351A-33
Sequence 33 Application US/08488351A
Patent No. 5843446
GENERAL INFORMATION:
APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
NAME: Maria C.H. Lin
REGISTRATION NUMBER: 29,323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (516)751-6849
INFORMATION FOR SEQ ID NO: 33:
                                                                                                                                                                                   46.8%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       46.8%;
85.7%;
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                                                                                                                                                                                   Query Match 46.8 Best Local Similarity 85.7 Matches 24; Conservative
                                                           45 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 45 amino acids
                                   SEQUENCE CHARACTERISTICS
                 INFORMATION FOR SEQ ID NO:
                                                                             TYPE: amino acid
TYPELOGY: linear
MOLECULE TYPE: peptide
US-08-446-692-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; MOLECULE TYPE: peptide US-08-488-351A-33
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Best Local Similarity
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                                                         LENGTH:
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TITLE OF INVENTION: Inmunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
NUMBER OF SEQUENCES: 114
ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
CITY: New York
STATE: NY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46.8%; Score 116; DB 4; Length 27
85.7%; Pred. No. 6.4e-09;
tive 0; Mismatches 2; Indels
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MEDIUM TYPE: Floppy disk
COMPUTER: Floppy disk
COMPUTER: Parentin PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/446,692
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
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NAME: MATIA C.H. LIN
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-4146 US2
RELECOMMUNICATION INFORMATION:
TELECHONE: (212)415-8745
TELEFRAX: (516)751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          19 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 46
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                                                                                                                                                                                                                                        CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
1 FILING DATE: 20-JUNE-1998
ATTORNEY/AGENT INFORMATION:
NAME: MAITAH H. Lin
REFERENCE/POCKET NUMBER: 29,323
REFERENCE/POCKET NUMBER: 1151-4157
TELECOMMUNICATION INFORMATION:
TELECPHONE: 212-758-4800
TELECPK: 212-751-6849
INFORMATION FOR SEQ ID NO: 36:
                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC Windows
*SOFTWARE: Word 97
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/770,014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 33, Application US/08446692
Patent No. 575951
GENERAL INFORMATION:
APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
LENGTH: 27 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: linear;
MOLECULE TYPE: peptide
US-09-770-014-36
STATE: N1
COUNTRY: USA
"TP: 10154-0054
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TYPE: amino acid
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85.7%; Pred. No. 6.4e-09;
Live 0; Mismatches 2; Indels
                                                                  Indels
                                  Pred. No. 6.4e-09;
0; Mismatches 2;
                               1 Similarity 85.7%; Pred. No. 6.46 24; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                              Sequence 36, Application US/09303323
Fatent No. 6228987
GENERAL INFORMATION:
APPLICANT: Wang, Chang YI
TITLE OF INVENTION: IMMUNOGENS
UNMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
ADDRESSEE: Morgan & Finnegan, L.L.P.
STREET: 345 Park Avenue
                                                                                                                          19 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 46
                                                                                                                                                       19 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 46
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CORRESPONDENCE ADDRESS:
ADDRESSEE: Morgan & Finnegan, L.L.P.
STREET: 345 Park Avenue
CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1151-4157
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: Word 97 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/303,323 FILING DATE: 30-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/100,414
FILING DATE: 20-JUNE-1998
ATTORNEY/AGENT INFORMATION:
NAME: MARIA H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-41!
TELEPHONE: 212-758-4800
TELEPHONE: 212-751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 36, Application US/09770014
Patent No. 6559282
GENERAL INFORMATION:
APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: NOVEL LHRH PI
TITLE OF INVENTION: IMMUNGENS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PC Windows
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STATE: NY
COUNTRY: USA
ZIP: 10154-0054
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     : 27 amino acids amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match 46.8
Best Local Similarity 85.7
Matches 24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; MOLECULE TYPE: peptide
US-09-303-323-36
                                  Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 3(CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New York
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                                                               Matches
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46.8%; Score 116; DB 2; L.
Best Local Similarity 85.7%; Pred. No. 6.4e-09;
Matches 24; Conservative 0; Mismatches 2;
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Sequence 36, Application US/09100414B
Sequence 36, Application US/09100414B
Sequence 36, Application US/09100414B
Sequence 36, Application US/09100414B
SERVERAL INFORMATION: NOVEL LHRH PEPTIDE
TITLE OF INVERTION: INMUNOGENS
NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
ADDRESSEE: ADDRES
                                                                                                                                                                                                                                                                                                                                                                       1151-4146 US2
PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/229,275
FILING DATE: 14-APR-1994
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION: 424
ATORNEY/AGENT INFORMATION:
NAME: MATIA C.H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-4146
FILECOMMUNICATION INFORMATION:
TELEPHONE: (212)415-6845
FILEPRAX: (516)751-6849
INFORMATION FOR SEQ ID NO: 19:
SEQUENCE CHARACTER:STICS:
LENGTH: 27 amino acids
TYPE: amino acids
TYPE: ABOUND ACIDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 46
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/100,414B
FILING DATE: 20-JUNE-1998
CLASSIFICATION: 424
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NAME: Maria H. Lin
REGISTRATION NUMBER: 29,323
REFRENCE/DOCKET NUMBER: 1151-
TELECOMMUNICATION INFORMATION:
TELEPAN: 212-756-4800
TELEPAN: 212-756-4800
INFORMATION FOR SED ID NO: 36:
SEQUENCE CHARACTERISTICS:
LENGTH: 27 amino acids
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC Windows
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ; MOLECULE TYPE: peptide US-08-488-351A-19
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MOLECULE TYPE: peptide
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ZIP: 10154-0054
COMPUTER READABLE FORM:
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CITY: New York
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PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US 08/446,692
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TELEFAX: (516)751-6849
INFORMATION FOR SEQ ID NO: 19:
SEQUENCE CHARACTERISTICS:
LENGIH: 27 amino acids
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STREET: 345 Park Avenue
CITY: New York
                                                               ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
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Best Local Similarity 85.73
Matches 24; Conservative
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MOLECULE TYPE: peptide

US-08-446-692-19
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MEDIUM TYPE: Floppy of COMPUTER: IBM PC comp
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10154-0053
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STATE: N
COUNTRY:
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RESULT 2
US-08-488-351A-20
US-08-488-351A-20
Sequence 20, Application US/08488351A
Patent No. 5843446
GENERAL INFORMATION:
APPLICANT: Ladd, Anna
APPLICANT: Anno APPLICANT: Anno APPLICANT: Anno APPLICANT: Amon, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines NUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS:
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APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Wan, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
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STATE: NY

COUNTRY: US

ZUP: 10154-0053

ZUP: 10154-0053

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Resease #1.0, Version #1.25

CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/488,351A
FILING DATE: 7-UN-1995
CLASSIFICATION DATA:
APPLICATION NUMBER: US 08/446,692
FILING DATE: 7-UN-1995
CLASSIFICATION DATA:
APPLICATION NUMBER: US 08/229,275
FILING DATE: 14-APR-1994
CLASSIFICATION NUMBER: US 08/057,166
FILING DATE: 14-APR-1992
CLASSIFICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-4146 F
REFERENCE/DOCKET NUMBER: 1151-4146 F
REFERENCE/DOCKET NUMBER: 1151-4146 F
TELECOMMUNICATION INDEMATION:
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THE PERFORMATION INDEMATION INDEMATION INDEMATION INDEMATION INDEMATION INDEMATION INDEMATION INDEMATION INDEMATION 
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82.8%; Pred. No. 8.1e-09;
Live 1; Mismatches 2;
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Patent No. 5759551
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STREET: 345 Park Avenue
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Best Local Similarity 82.8
Matches 24; Conservative
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MOLECULE TYPE: peptide
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GY: linear
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GENERAL INFORMATION:
APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
NUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS:
ADDRESSEE: Maria C.H. Lin
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines NUMBER OF SEOFENCES: 114
CORRESPONDENCE ADDRESS:
ADDRESSEE: Maria C.H. Lin
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85.7%; Pred. No. 6.4e-09;
Live 0; Mismatches 2; Indels
                                                                                                                                                                                                                                     COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/446,692
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
ATTORNEY/AGRNT INFORMATION:
NAME: Maria C.H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/COKET NUMBER: 1151-4146 US2
TELECOMMULCATION INFORMATION:
TELECOMMULCATION: (212)415-8745
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENY APPLICATION DATA:
APPLICATION NUMBER: US/08/488,351A
FILING DATE: 7-JUN-1995
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248
1 XHWSYGLRPGSSGPSLKLLS......HRLEGVEGPSLHWSYGLRPX 47
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/cgn2_6/ptodata/1/iaa/5B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6A_COMB.pep:*
/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/pcvuS_COMB.pep:*
/cgn2_6/ptodata/1/iaa/pcvuS_COMB.pep:*
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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US-08-46-692-19
US-08-488-311A-19
US-09-100-414B-36
US-09-30-332-36
US-09-770-014-36
US-08-446-692-33
US-08-446-692-33
US-08-31AB-33
US-09-303-323-43
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US-09-100-414B-55
US-09-303-323-55
US-09-770-014-55
US-09-100-414B-41
US-09-100-414B-41
US-09-303-323-41
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US-09-770-014-59
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                                                                                                                                                                                                                                                                                                                                                                                                                                                 Maximum Match 100%
Listing first 45 summaries
                                                                    protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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Maximum DB seq length: 200000000
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Match 1
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Perfect score:
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                                                                                                    Run on:
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No.
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GENERAL INCRMATION:
APPLICANT: Ladd, Anna
APPLICANT: Tand, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: Immunogenic universal immune stimulators for vaccines
NUMBER OF SEGUENCES: 114
CORRESPONDENCE ADDRESS:
ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
                                                                                                             Appl
Appl
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MEDIUM TYPE: Floppy disk
COMPUTER: Eloppy disk
COMPUTER: Eloppy disk
COMPUTER: Eloppy disk
CORRENT MESTER: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/446,692
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Maria C.H. Lin
REGISTRATION NUMBER: 1151-4146 US2
TELEPHONE: (212,912)
TELEPHONE: (312,912)
TELEPHONE: (312,912)
SEQUENCE CHARACTERISTICS:
US-09-100-414B-38
US-09-303-333-338
US-09-300-502-10
US-09-100-414B-53
US-09-770-014-53
US-09-770-014-53
US-09-770-014-53
US-09-770-014-60
US-09-770-014-60
US-09-770-014-60
US-09-770-014-60
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US-09-770-014-57
US-09-770-014-57
US-08-448-57
US-08-448-57
US-08-448-57
US-08-448-57
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 20, Application US/08446692 Patent No. 5759551
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               : 42 amino acids
amino acid
3Y: linear
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Les 24; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        New York
; MOLECULE TYPE:
US-08-446-692-20
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COUNTRY:
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Query Match
Best Local S:
Matches 24
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somatostatin; growth promotion; CD4 receptor; HIV-1; antiviral; FMDV; foot and mouth disease virus; immunoglobulin E; Igg; anti-allergic; Plasmodium falciparum; circumsporozoite; antimalarial; CETP; cholesteryl ester transport protein; anti-arteriosolerotic. 99WO-US13975. Chimeric - Measles virus. Chimeric - Rattus sp. WO9966957-A2. 21-JUN-1999; 29-DEC-1999

(UNBI-) UNITED BIOMEDICAL INC. 98US-0100412. 20-JUN-1998;

Wang CY;

WPI; 2000-160564/14

New artificial T helper cell epitope and derived immunogens with target antigenic site, for immunization against e.g. malaria, arteriosclerosis or human immune deficiency virus

Example 1; Page 79; 129pp; English.

and immunogenic peptides comprising the Th epitopes of the invention along with B cell epitopes. The The Peptides and peptide immunogenic containing them, are used to induce a Thelper cell response.

Containing them, are used to induce a Thelper cell response.

Containing them, are used to induce a Thelper cell response.

Expecifically against Plasmodium falciparum, cholesteryl ester transport protein (CETP) or HIV epitopes, but more generally against any pathogen, immunocractive self-antigen or tumour antigen. The The peptides and peptide immunogens may be used for prevention and/or treatment of immunocractive self-antigen or tumour antigen. The The peptide immunogens may be used for prevention and/or treatment of hormone (IMRH) for contraception, treatment of a promiscuous of immunocastration); for promoting the growth of a mimals; or for treating allergies or arteriosclerosis incorporation of a promiscuous Thelper cell-mediated immune massles virus F (WF) protein and sequences AAV91121 represents a promiscuous Thelper epitope (Irom the measles virus F (WF) protein and sequences AAV91126 represent synthetic Th epitopes based on the from hepatities and AAV91245 represent synthetic Th epitopes based on the AAV91166 represent synthetic antigenic peptides comprising somatostatin and AAV91201-Y91207 are antigenic peptides comprising somatostatin and AAV91201-Y91207 are antigenic peptides comprising somatostatin and AAV91201-Y91207 are antigenic peptides which may be used to promote growth in livestock. AAX91208 is a human CD4 CDR2 antigenic peptides which may be used to promote growth in livestion of religent peptides which may be used to promot antigent peptides which may be used in the treatment of allergies.

AAY91220 is a peptide derived from foot and mouth disease virus (FMDV)
VPI capsid protein and AAY9121-V91212 comprise this peptide and a Th
epitope. AAY91224-Y91225 comprise the CS antigen and an WNF Th
antigen, and AAY91224-Y91225 comprise the CS antigen and an WNF Th
epitope and may be used in a malaria vaccine. AAY91228-Y91231 represent
CETP-derived peptides and AAY9122-Y91241 are immunogens comprising a
CETP peptide and a Th epitope which may be used to prevent or treat
arteriosclerosis and cardiovascular disease. AAY91277 and AAY9125-Y91257 are HIV-1 neutralising B-cell epitopes, and AAY91248-Y91251 and AAY91258-Y91273 are antigenic peptides comprising MVH Th and HIV-1 B-cell The invention relates to novel promiscuous T helper cell epitopes (Th).

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epitope which may be used as a component in an anti-HIV-1 vaccine. Ay491198 and AAY491199 are respectively an immunostimulatory invasin protein epitope from Yersinia species, and hinge spacer peptide, both of which may optionally be used in the antigenic peptides of the
                                                                                                                                                         Gaps
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                                                                                                                         Score 108; DB 21; Length 27;
                                                                                                                                                      Indels
                                                                                                                                       3e-07;
                                                                                                                                         Pred. No. 3e-0
4; Mismatches
                                                                                                                                                                                                                                                          Search completed: September 24, 2003, 17:40:08 Job time : 54.1191 secs
                                                                                                                                                                                      19 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 46
                                                                                                                                                                                                     43.5%;
71.4%;
                                                                                                                                                         Conservative
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Matches 20; Conserv
                                                                                              AA;
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                                                                 invention
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                                                                                                                            Query Match
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infection of T cells. AAY90212 is a modified version of a human IgE (immunoglobulin E) CH3 domain, and AAY90213-Y90219 are Th epitope/IgE CH3 antigenic peptides which may be used in the treatment of allergies. AAY91220 is a peptide derived from foot and mouth disease virus (FMDV) VPI capsid protein and AAY9121-Y91222 comprise the peptide and a Th epitope. AAY91223 is a Plasmodlum falciparum circumsporozoite (CS) target antigen. AAY91224 and AAY91225 comprise the CS antigen and an MVFT the epitope and may be used in a malaria vaccine. AAY91228-Y91231 represent CETP-derived peptides and AAY91232-Y91241 are immunogens comprising a arteriosclerosis and cardiovascular disease. AAY91247 and AAY9125-Y91257 are HIV-1 neutralising B-cell epitopes, and AAY91284-Y91251 and AAY91258-Y91273 are antigenic peptides comprising MVH Th and HIV-1 B-cell
                                                                                                                                                                                                                                                             epitope which may be used as a component in an anti-HIV-1 vaccine. Axy1198 and AXY291199 are respectively an immunostimulatery invasin protein epitope from Yersinia species, and hinge spacer peptide, both of which may optionally be used in the antigenic peptides of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Promiscuous T-cell epitope, measles virus F protein; MVF; hepatitis B virus surface antigen; HBV; immunogenic; B-cell epitope; luteinising hormone releasing hormone; LHRH; contraceptive; anticancer; somatostatin; growth promotion; CD4 receptor; HIV-1; antiviral; FMDV; foot and mouth disease virus; immunoglobulin E; IgE; anti-allergic; Plasmodium falciparum; circumsporozoite; antimalarial; CETP; cholesteryl ester transport protein; anti-arteriosclerotic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       New artificial T helper cell epitope and derived immunogens with target antigenic site, for immunization against e.g. malaria, arteriosclerosis or human immune deficiency virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to novel promiscuous {\tt T} helper cell epitopes ({\tt T}h), and immunogenic peptides comprising the {\tt T}h epitopes of the invention
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                                                                                                                                                                                                                                                                                                                                                                                                                       45.6%; Score 113; DB 21; Length 27; 82.1%; Pred. No. 6.6e-08;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Example 1; Page 84; 129pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY91175 standard; peptide; 31 AA.
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Chimeric - Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                             23; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                       Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                27 AA;
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along with B cell epitopes. The Th epitopes and peptide immunogens containing them, are used to induce a Theipre cell response, specifically against Plasmodium falciparum, cholesteryl ester transport containing them, are used to induce a Theipre cell response, specifically against Plasmodium falciparum, cholesteryl ester transport corrections (CEP) or HIV epitopes, but move generally against any pathogen, immunoreactive self-antique not runour antiqen. The Pitopes and corrections (HIV, foot-and-mouth disease or malaria); for cancer immunoreactive self-antique not the contained in the contained by the contained in the category of the contained in the category of corrections (HIV, foot-and-mouth disease or malaria); for cancer increased in the category of corrections (HIV, foot-and-mouth disease or taint in mart and of hormone (LHMH) for contraseption, treatment of approach of the contraseption of a promiscuous of a promiscuous of the perfect of the functional in genetically diverse subjects) into an indumuno contraseption of a promiscuous The peltope from the measists virus (HWY) protein and sequences ANY91121 represents a promiscuous The peltope from the measists virus (HWY) surface antique, and sequences ANY91143 represents a promiscuous The peltope from the measists virus (HWY) surface antique, and sequences ANY9115 are synthetic epitopes derived from this HWY peltope. Sequence ANY91143 represents a promiscuous The peltope. ANY9115 are synthetic epitopes derived from this HWY peltope. Sequence ANY91145 are synthetic epitopes and ANY91209 '91207 are antiquent coptides. ANY9116 are surfaced to promise the sequence of protein and any91144 virient of the contrast of the performent and any and ANY91209 and any persent HWY infection of T cells. ANY90121 is a modified version of a buman 19E coptides which may be used from foot and 
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hepatitis B virus surface antigen; HBV; immunogenic; B-cell epitope;
luteinising hormone releasing hormone; LHRH; contraceptive; anticancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 110; DB 21; Length 31;
Pred. No. 2e-07;
1; Mismatches 5; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     44.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
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stimulator is linked to a peptide or protein hapten containing B call and/or cytotoxic T lymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous halper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of a heterogeneous population expressing diverse HIA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Yersinia. Spacer amino acid sequences (e.g. Gly-Gly) can be provided between the invasin and Th domains and between the immune stimulator and hapten can be omitted from the immune stimulator component. The present sequence represents an LHRH. containing immunogenic peptide as above which can be used as a potent vaccine for treating e.g.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic immunogenic peptides are provided in which a universal immune
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          prostatic hyperplasia, androgen-dependent carcinoma, prostatic carcinoma, testicular carcinoma, endometriosis, benign uterine tumours, recurrent functional ovarian cysts, (severe) premenstrual syndrome or oestrogen-dependent breast cancer, or for induction of infertility. (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                   Helper T cell epitope; universal immune stimulator; invasin; hapten; vaccine; LHRH; luteinising hormone releasing hormone; prostate; androgen-dependent carcinoma; antitumour; infertility; measles virus F protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "measles virus F protein helper T cell epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Immunogenic luteinising hormone releasing hormone peptide(s) that suppress LHRH activity in males and females
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 116; DB 15; Length 45; Pred. No. 5e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                       'note= "invasin domain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "LHRH hapten"
                                                                LHRH-containing immunogenic peptide.
                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
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94US-0229275.
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(first entry)
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(WANG/) WANG C Y.
(ZAMB/) ZAMB T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   45 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9425060-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         28-APR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27-APR-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14-APR-1994;
10-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        10-NOV-1994
                                                                                                                                                                                                                                                                                             Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ladd AE,
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                                                                                                                                                                                                                                                                                                                                                                                            Domain
                                                                                                                                                                                                                                                                                                                                                                 Key
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New artificial T helper cell epitope and derived immunogens with target antigenic site, for immunization against e.g. malaria, arteriosclerosis or human immune deficiency virus

(UNBI-) UNITED BIOMEDICAL INC.

WPI; 2000-160564/14.

Wang CY;

99WO-US13975. 98US-0100412.

21-JUN-1999; 20-JUN-1998;

29-DEC-1999.

Chimeric - Measles virus. Chimeric - Rattus sp.

W09966957-A2

Example 1; Page 80; 129pp; English.

hepatitis B virus sufface antigan; HBV; immunogenic; B-cell epitope; luteinising hormone releasing hormone; LHRH; contraceptive; anticancer; somatostatin; growth promotion; CD4 receptor; HIV-1; antiviral; FMDV; foot and mouth disease virus; immunoglobulin E; IgE; anti-allergic; Plasmodium falciparum; circumsporozotic; antimalarial; CETP; cholesteryl ester transport protein; anti-arteriosclerotic.

Modified MVF Th epitope/LHRH antigenic peptide, SEQ ID NO:43. Promiscuous T-cell epitope; measles virus F protein; MVF;

22-MAY-2000 (first entry)

AAY91163;

AAY91163 standard; peptide; 27 AA.

AAY91163

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The invention relates to novel promiscuous T helper cell epitopes (Th), and immunogenic peptides comprising the Th epitopes of the invention along with B cell epitopes. The Th epitopes and peptide immunogens containing them, are used to induce a T helper cell response, specifically against Plasmodium falciparum, cholesteryl ester transport protein (EFFP) or HIV epitopes, but more generally against any pathogen, immunoreactive self-antigen or tumour antigen. The Th epitopes and peptide immunogens may be used for prevention and/or treatment of infections (HIV, foot-and-mouth disease or malaria); for cancer immunotherapy; for inhibition of the action of luteinising hormone releasing hormone (LHRH) for contraception, treatment of hormone caleasing hormone (LHRH) for contraception, treatment of hormone (LHRH) for contraception, treatment of hormone caleasing allergies or arteriosclerosis. Incorporation of a promiscuous Th (functional in genetically diverse subjects) into an immunogen response, resulting in production of antibodies against a target antigen. Th can replace carrier proteins and pathogen-derived Thelper antigen. Th can replace carrier proteins and pathogen derived Thelper
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           comprising an LHRH sequence joined to a promiscuous Th epitope. AAY91197 is the LHRH target antigenic peptide used in these LHRH antigenic peptides. AAY91200 is somatostatin, and AAY91201-Y91207 are antigenic peptides comprising somatostatin and a Th epitope. Somatostatin and immunogens may be used to promote growth in livestock. AAY91208 is a human CD4 CDR2-like domain antigenic site, and AAY91209-Y90211 are MVH Th epitope/CD4 CDR2 antigenic peptides which may be used to prevent HIV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        epitopes. Sequence AAY91121 represents a promiscuous T helper epitope from the measles virus F (MYF) protein and Sequences AAY91122- Y91142, AAY91226 and AAY91246 represents yorthetic Th epitopes based on the MYF Th epitope. Sequence AAY91143 represents a promiscuous Th epitope HAY91155 are synthetic epitopes derived from themseritis B virus (HBY) surface antigen, and sequences AAY91144 *Y91155 are synthetic epitopes derived from this HBV epitope. AAY91156-Y91196, AAY91227 and AAY91242-Y91244 are antigenic peptides.
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Gaps

5

Indels

2;

0; Mismatches

Conservative

Local Similarity nes 24; Conserv

Matches

LSEIKGVIVHRLEGVEGPSLHWSYGLRP 46

19 61

ò g Helper T cell epitope; F protein; Measles virus; peptide immunogen; LHRH;

Peptide immunogen comprising a Th epitope and LHRH target antigen.

luteinising hormone-releasing hormone; spermatogenesis; ovulation; oestrus; sexual development; sex hormone; promiscuous T helper epitope; vaccine; contraceptive; hormone-dependent tumour; prostate cancer; breast cancer; endometriosis; boar taint; meat quality; chimera;

18..27 /note= "LHRH antigenic epitope AAY68566"

/note= "helper Th epitope AAY68540" 16..17 /note= "spacer"

Location/Qualifiers

Peptide Peptide Peptide

Chimeric - Measles virus.

immunocastration.

Chimeric - Unidentified.

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along with B cell epitopes. The Th epitopes and peptide immunogens containing them, are used to induce a T helper cell response, specifically against Plasmodium falciparum, cholestery) ester transport protein (CETP) or HIV epitopes, but more generally against pathogen, immunogens may be used for prevention and/or treatment of infections (HIV, foot-and-mouth disease or malaria); for cancer immunotherapy; for inhibition of the action of luteinising hormone cells for prevention of luteinising hormone cells for contraception, treatment of hormone dependent cancer, prevention of action of luteinising hormone cells for provention of the action of luteinising hormone cells for contraception, treatment of hormone cells for promoting the growth of animals; or for immunocastration); for promoting the growth of animals; or for treating allergies or arteriosclerosis. Incorporation of a promiscous or functional in genetically diverse subjects) into an immunogen improves capacity to induce a strong T helper cell-mediated immune cespons. Sequence AAY91121 represents a promiscous T halper epitope antigen. The can replace carrier proteins and pathogen-derived T helper epitopes. Sequence AAY91141 represents a promiscous T halper epitope contingen. The epitopes based on the AAY91226 and AAY91245 represents a promiscous T hepitope based on the aavance of the patitope. Sequence AAY91141 represents a promiscous T hepitope and patitope and patitope. Trom hepatitis B virus (HBV) surface antigen, and sequences Aay91121 certains and sequences antigen, and sequences antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAY91144-Y91155 are synthetic epitopes derived from this HBV epitope. AAY91156-Y91196, AAY91227 and AAY9124-Y91244 are antigenic peptides. Comprising an LHRH sequence joined to a promiscuous Th epitope. AAY91197 is the LHRH target antigenic epetide used in these LHRH antigenic peptides. AAY91200 is somatostatin, and AAY91201-Y91207 are antigenic peptides. Comprising somatostatin and a Th epitope. Somatostatin immunogens may be used to promote growth in livestock. AAY91208 is a human CD4 CDR2-like domain antigenic site, and AAY91209-Y90211 are MVH The peptides comprise to peptides which may be used to prevent HIV infection of T cells. AAY90213 is a modified version of a human IgE antigenic peptides which may be used for prevent HIV infection peptides which may be used in the treatment of a human IgE antigenic peptides which may be used in the treatment of a largines. AAY91220 is a peptide derived from foot and mouth disease virus (FMN) and capital procein and AAY91221-Y91222 comprise this peptide and a Theorem and a Theorem
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        epitope. AAY91223 is a plasmodium falciparum circumsporozoite (CS) target antigen, and AAX91224-X91225 comprise the CS antigen and an WWF Th explore and may be used in a malaria vaccine. AAX91228-Y91211 represent CETP-derived peptides and AAY9123-Y91241 are immunogens comprising a CETP peptide and a Th epitope which may be used to prevent or treat arteriosclerosis and cardiovascular disease. AAY91247 and AAY91252-Y91257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       are HIV-1 neutralising B-cell epitopes, and AAY91248-Y91251 and AAY91258-Y91273 are antiquency emptides comprising MVH Th and HIV-1 B-cell epitope which may be used as a component in an anti-HIV-1 vaccine.

AAY91198 and AAY91199 are respectively an immunostimulatory invasin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   protein epitope from Yersinia species, and hinge spacer peptide, both of which may optionally be used in the antigenic peptides of the
                                                                                   invention relates to novel promiscuous T helper cell epitopes (\text{Th}), immunogenic peptides comprising the Th epitopes of the invention
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      46.8%; Score 116; DB 21; Length 27;
85.7%; Pred. No. 2.7e-08;
Live 0; Mismatches 2; Indels
                          Example 1; Page 77; 129pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 27 AA;
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(UNBI-) UNITED BIOMEDICAL INC

WPI; 2000-160562/14.

Wang CY;

99WO-US13960. 98US-0100414.

21-JUN-1999; 20-JUN-1998;

W09966952-A1

29-DEC-1999,

New peptide immunogen containing luteinising hormone-releasing hormone antigen site and helper T cell epitope, for e.g. contraception and treatment of cancer -

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ij
                                         The present sequence represents a peptide immunogen comprising a helper T cell (Th) epitope of the F protein of the Measles virus and a target antigen, luteinising hormone-releasing hormone (LHRH).

The peptide immunogens cause induction of a specific immune response to LHRH which is involved in regulation of spermatogenesis, ovulation, oserrus, sexual development and secretion of sex hormones. Provision of a promiscuous T helper epitope (which is functional in genetically diverse subjects) provides optimum immunogenicity to the B cell epitopes of the target antigen and thus high antibody titres against the target antigen and thus for use as (reversible)
                                                                                                                                                                                                                                                                                                                       contraceptive; control of hormone-dependent tumours (cancer of prostate or breast, also endometriosis); to prevent boar taint (and improve meat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Length 27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         46.8%; Score 116; DB 21;
85.7%; Pred. No. 2.7e-08;
live 0; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             19 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 1; Page 63; 102pp; English.
                                                                                                                                                                                                                                                                                                                                                                           quality) and for immunocastration.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAR62721 standard; peptide; 45 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Best Local Similarity 85.7
Matches 24; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                          27 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
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LSEIKGVIVHRLEGVEGPSLHWSYGLRP 46

19

g ð

Conservative

Local Similarity les 24; Conserv

Best Loc

AAY68567 standard; peptide; 27

RESULT 11

(first entry)

05-MAY-2000

AAY68567;

AAY68567
ID AAY(
XX
AC AAY(
XX
DT 05-N

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Claims 8, 12; Page 86; 213pp; English.
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ID AAY9
                 \overset{\circ}{\times}\overset{\circ}{\times}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\circ}\overset{\circ}{\ci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potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of a heterogeneous population expressing diverse HiA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Yersinia. Spacer amino acid sequence from the invasin protein of Yersinia. Components. When the hapten is LHRH, then optionally the invasin domain can be omitted from the immune stimulator component when the hapten is LHRH. Then optionents when the as above which can be used as a potent vaccine for treating e.g. prostatic haptenlasta, androgen-dependent carcinoma, prostatic carcinoma, testicular carcinoma, endometriosis, benign premenstrual syndrome or oestrogen-dependent breast cancer, or for induction of infertility.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1;
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/note= "measles virus F protein helper T cell epitope"
18..27 /note= "LHRH hapten"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Helper T cell epitope; universal immune stimulator; invasin; hapten;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  vaccine; LHRH; luteinising hormone releasing hormone; prostate; androgen-dependent carcinoma; antitumour; infertility; measles virus F protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          \mbox{Immunogenic} luteinising hormone releasing hormone peptide(s) that suppress LHRH activity in males and females
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             47.2%; Score 117; DB 15; Length 42; 82.8%; Pred. No. 3.4e-08; 1ve 1; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 18 LLSEIKGVIVHRLEGVEGPSLHWSYGLRP 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LHRH-containing immunogenic peptide.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               94WO-US04832.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        42 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      28-APR-1994;
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10-SEP-1995
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Synthetic immunogenic peptides are provided in which a universal immune stimulator is linked to a peptide or protein hapten containing B cell and/or cytotoxic T lymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of a heterogeneous population expressing diverse HIA phenotypes, and (B) an adjuvant peptide sequences (e.g. Gly-Gly) can be provided between the invasin and Th domains and between the immune stimulator and hapten components. When the hapten is LHRH, then optionally the invasin domain components equence represents an iHRH-containing it invasin domain component peptide as above which can be used as a potent vaccine for treating e.g. prostatic hyperplasia, androgen-dependent carcinoma, testicular carcinoma, endometriosis, bengin uterine tumours, recurrent functional ovarian cysts, (severe) contains and concer, or for miduction of inferting energy of inferting and powarian cysts, (severe)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              New artificial T helper cell epitope and derived immunogens with target antigenic site, for immunization against e.g. malaria, arteriosclerosis or human immune deficiency virus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 116; DB 15; Length 2'
Pred. No. 2.7e-08;
0; Mismatches 2; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    sequence is particularly preferred
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85.7%;
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Chimeric - Rattus sp.
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Best Local Similarity
Matches 24; Conserv
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Synthetic
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                                                                                                                                                                                                                                                                                                                                                                                                                                     Domain
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treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic pypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GRRH antibody titres. The present sequence is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Synthetic immunogenic peptides are provided in which a universal immune stimulator is linked to a peptide or protein hapten containing B cell and/or cytotoxic T lymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of a heterogeneous population expressing diverse HLA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Versinia. Spacer amino acid sequences (e.g. Gly-Gly) can be provided between the invasin and Th domains and between the immune stimulator and hapten
                                                                                                                                                                                                                                                                                                                                                                      1..15 .....measles virus F protein helper T cell epitope"
16..25
                                                                                                         Gaps
                                                                                                                                                                                                                                                                                              Helper T cell epitope, universal immune stimulator; invasin; hapten; vaccine; LHRH; luteinising hormone releasing hormone; prostate; androgen-dependent carcinoma; antitumour; infertility;
                                                                                                                             46
                                                                                                                                                 49
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                                                                                    DB 23; Length 50;
                                                                                                                                       2 HWSYGLRPGSSGPSL----KLLSEIKGVIVHRLEGVEGPSLHWSYGLRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Immunogenic luteinising hormone releasing hormone peptide(s) that suppress LHRH activity in males and females
                                                                                   Score 141.5; DB 23;
Pred. No. 2.4e-11;
1; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                "LHRH hapten"
                                                                                                                                                                                                                                                                           LHRH-containing immunogenic peptide.
                                                                                                                                                                                                     AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 8; Page 84; 213pp; English.
                                                                                                                                                                                                   AAR62705 standard; peptide; 25
                                                                                   57.1%;
58.8%;
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94US-0229275
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                                                                                                                                                                                                                                                       (first entry)
                                                                                   Query Match 57.1
Best Local Similarity 58.8
Matches 30; Conservative
                                                                                                                                                                                                                                                                                                                               measles virus F protein.
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/note=
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                                                                50 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9425060-A1
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14-APR-1994;
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10-SEP-1995
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                                                                 Sequence
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                                                                                                                                                                                RESULT 7
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components. When the hapten is LHRH, then optionally the invasin domain can be omitted from the immune stimulator component.
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                                                                              for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "measles virus F protein helper T cell epitope"
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                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Helper T cell epitope; universal immune stimulator; invasin; hapten; vaccine; LHRH; luteinising hormone releasing hormone; prostate; androgen-dependent carcinoma; antitumour; infertility; measles virus F protein.
                                                The present sequence represents an LHRH-containing, invasin-free immunogenic peptide as above which can be used as a potent vaccine
                                                                                                treating e.g. prostatic hyperplasia, androgen-dependent carcinoma, prostatic carcinoma, testicular carcinoma, endometriosis, benign uterine tumours, recurrent functional ovarian cysts, (severe) premensitual syndrome or oestrogen-dependent breast cancer, or for induction of infertility.
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                                                                                                                                                                                                                                                                                                                                           Length 25,
                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                           Score 117; DB 15;
Pred. No. 1.8e-08;
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                                                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LHRH-containing immunogenic peptide.
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                                                                                                                                                                                                                                                                                                                                           47.28;
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94US-0229275
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(first entry)
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Best Local Similarity 85.7°
Matches 24; Conservative
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33..42
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16..30
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                                                                                                                                                                                                                                                                                     25 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (LADD/) LADD A E. (WANG/) WANG C Y. (ZAMB/) ZAMB T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (ZAMB/) ZAMB
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            28-APR-1994;
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10-SEP-1995
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antibodies against gonadotroph releasing hormone (GRRH also known as luteinising hormone releasing hormone. LIRRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunomimic pubject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic high and specific anti-GRRH attitres. The immunogen is effective in eliciting is a synthetic immunogen of the invention.
                                                                    Gonadotrophin releasing hormone; GDRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
brasst cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                                                      'note= "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue -
                                                                                                                                                                                                                                                                                                                                                                                                                                     "Gonadotrophin releasing hormone epitope
                                                                                                                                                                                                                                                                                                  "Gonadotrophin releasing hormone epitope
                                                                                                                                                                                                                                                                                                                                                                           "Malaria CSP protein (378-398 aa)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note= "Amidated glycine or glycinamide"
                                                                                                                                                                                                                                                                                                                                               "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                         "Spacer peptide"
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                                                                                                                                                                                                                          Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stevens VC;
                                                                                                                                                               Chimeric - Plasmodium falciparum.
Chimeric - Mammalia.
                                           Synthetic immunogen peptide 12.
                                                                                                                                                                                                                                                        /label= OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      04-MAY-2001; 2001WO-US14363.
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              (first entry)
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51
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             51 AA;
                                                                                                                                                                                                                                        Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WO200185763-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Modified-site
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                                                                                                                                                                                            Synthetic
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                                                                                                                                                                                                                                                                                    Peptide
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The invention relates to a synthetic immunogen for inducing specific antibodies against gonadotropin releasing hormone (GnRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the
                                                                                                                                                                                                     Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                     "Other- Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue.
                                                                                                                                                                                                                                                                                                                                                                                                               "Gonadotrophin releasing hormone epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          epitope
46
                        50
              HWSYGLRPGSSGPSL--KLLSEIK--GVIVHRLEGVEGPSLHWSYGLRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         42..50
/note= "Gonadotrophin releasing hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "Amidated glycine or glycinamide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Tetanus toxoid (947-967 aa)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Spacer peptide'
                                                                                                                                                                                                                                                                                                                                               Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Stevens VC;
                                                                                             A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Claim 11; Page 11; 43pp; English.
                                                                                                                                                                              Synthetic immunogen peptide 10.
                                                                                             AAU11429 standard; peptide; 50
                                                                                                                                                                                                                                                                                       Chimeric - Clostridium tetani.
Chimeric - Mammalia.
                                                                                                                                                                                                                                                                                                                                                                        'label= OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                          (1..10 aa)"
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50
                                                                                                                                                   (first entry)
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/note=
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                                                                                                                                                                                                                                                                                                                   Synthetic.
                                                                                                                        AAU11429;
                                                                                                                                                                                                                                                                                                                                                                                                    Peptide
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Gaps

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Score 144; DB 23; Length 51; Pred. No. 1.1e-11; 3; Mismatches 9; Indels

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58.1%; ilarity 57.1%; Conservative 8

Local Similarity les 28; Conserv

Matches

Query Match

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Clostridium tetani
                 - Mammalia
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                                                                             Misc-difference
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                                                                                                                                                                                                                                                                                                                  Modified-site
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 Chimeric -
                              Synthetic.
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                 Chimeric
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to a synthetic immunogen for inducing specific antibodies against gonadotropin releasing hormone (GnRH also known as luteinising hormone releasing hormone, LHRI) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunomimic peptide epitope or its analogue. The synthetic animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other synaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic immunogen of the invention.
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luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunominic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                       Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide
                                                                                                                      /note= "Gonadotrophin releasing hormone epitope"
                                                            "Measles virus fusion protein F epitope"
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                                                                                                                                                      /note= "Amidated glycine or glycinamide"
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100.0%; Pred. No. 6.4e-14;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   17 KLLSEIKGVIVHRLEGVEGPSLHWSYGLRP 46
                                                                                         "Spacer peptide"
                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                              Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AAU11430 standard; peptide; 46 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 11; Page 7; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Synthetic immunogen peptide 11.
                                                                                                                                                                                                                                                                              05-MAY-2000; 2000US-202328P.
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                                                             /note=
                                                                                          /note=
23..31
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Synthetic
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                                           Peptide
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                                                                        Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide
                                                                                                                                                                                                                                                                                                                                        "Gonadotrophin releasing hormone epitope
                                                                                                                     "Gonadotrophin releasing hormone epitope
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... 7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                              /note= "Amidated glycine or glycinamide"
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                                                                                                                                                                                                                                         "Tetanus toxoid (830-844
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 147.5;
Pred. No. 3.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       4; Mismatches
                                                                                                                                                                                                                                                                  32..37
/note= "Spacer peptide"
                                                                                                                                                                                         /note= "Spacer peptide"
Location/Qualifiers
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                                               /label= OTHER
/note= "Other=
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       59.5%;
62.5%;
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/note= "Gona
(1..10 aa)"
11..16
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                                                                                                                                                                                                                                                                                                                                                                 (2-10 aa)"
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Best Local Similarity 62.5'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              epitope or its analogue
                                                                                                                                                                                                                                                                                                                    38..46
/note=
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/note=
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Misc-difference 1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Query Match
                                                      Peptide
                                                                          Peptide
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                                                                                                                                                                                                                                                                                            The invention relates to a synthetic immunogen for inducing specific antibodies against gonadctropin releasing hormone (GnRH also known as luteinising hormone releasing hormone. LIRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other synaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunominic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue
/note= "Spacer peptide"
39..47
/note= "Gonadotrophin releasing hormone epitope
                                                                                                                                                                                                                       synthetic immunogen for inducing immune response against
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 47;
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                                                   /note= "Amidated glycine or glycinamide'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  2 HWSYGLRPGSSGPSLKLLSEIKGVIVHRLEGVEGPSLHWSYGLRP
                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 246; DB 23;
Pred. No. 3.2e-25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                  99.2%; Scor.
100.0%; Pred. No. ...
0; Mismatches
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                                                                                                                                                                               Stevens VC;
                                                                                                                                                                                                                                                                          Claim 11; Page 11; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAU11424 standard; peptide; 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Synthetic immunogen peptide 5.
                                                                                                                  04-MAY-2001; 2001WO-US14363,
                                                                                                                                      05-MAY-2000; 2000US-202328P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (first entry)
                               (2-10 aa)'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
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Chimeric - Mammalia.
Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity
                                                                                                                                                         (APHT-) APHTON CORP.
                                                                                                                                                                                                  WPI; 2002-049440/06
                                                                                                                                                                                                                                                                                                                                                                                                                                   47 AA;
                                                                        WO200185763-A2
                                         Modified-site
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                                                                                            15-NOV-2001
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            Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 as luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other synthectic phypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to a synthetic immunogen for inducing specific
                             "Other" Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             antibodies against gonadotropin releasing hormone (GnRH also known
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue -
                                                                                         "Gonadotrophin releasing hormone epitope"
                                                                                                                                                                                                                 "Measles virus fusion protein F epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
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ive 0; Mismatches
                                                                                                                                                        "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAU11420 standard; peptide; 31 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 11; Page 9; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic immunogen peptide 1.
OTHER
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                                                                                                                                                                                                                                                                                                                                                                                                               04-MAY-2001; 2001WO-US14363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-MAY-2000; 2000US-202328P
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
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Chimeric - Mammalia.
                                                                                                                    11..16
/note=
17..34
/note= "
/label=
                                 /note=
1..10
                                                                                         /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Grimes S, Michaeli D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (APHT-) APHTON CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2002-049440/06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Best Local Similarity
Matches 33; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     34 AA;
                                                                                                                                                                                                                                                                                   WO200185763-A2
                                                                                                                                                                                                                                                                                                                                                   15-NOV-2001.
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September 24, 2003, 16:58:36; Search time 53.1191 Seconds (without alignments) 140.442 Million cell updates/sec
                                                                                                                                                                                                                                   248
1 XHWSYGLRPGSSGPSLKLLS.....HRLEGVEGPSLHWSYGLRPX 47
                                                                                                                                                                                                                                                                                                                                                                                                               1107863
GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                         Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                   1107863 seqs, 158726573 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                                                    OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                  BLOSUM62
Gapop 10.0 , Gapext 0.5
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Maximum DB seq length: 200000000
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Sequence:
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A_Geneseq_19Jun03:* SIDSI_gcadata/geneseq_geneseqp_embl_AA1980.DAT:* SIDSI_gcadata/geneseq_geneseqp_embl_AA1981.DAT:* SIDSI_gcadata/geneseq_geneseqp_embl_AA1981.DAT:* SIDSI_gcadata/geneseq_geneseqp_embl_AA1981.DAT:* SIDSI_gcadata/geneseq_geneseqp_embl_AA1981.DAT:* SIDSI_gcadata/geneseq_geneseqp_embl_AA1986.DAT:* SIDSI_gcadata/geneseq_geneseqp_embl_AA1986.DAT:* SIDSI_gcadata/geneseq_geneseqp_embl_AA1980.DAT:* SIDSI_gcadata/geneseq_geneseqp_embl_AA1991.DAT:* SIDSI_gcadata/geneseq_geneseqp_embl_AA1991.DAT:* SIDSI_gcadata/geneseq_geneseqp_embl_AA1991.DAT:* SIDSI_gcadata/geneseq_geneseqp_embl_AA1991.DAT:* SIDSI_gcadata/geneseq_geneseqp_embl_AA1991.DAT:* SIDSI_gcadata/geneseq_geneseqp_embl_AA1991.DAT:* SIDSI_gcadata/geneseq_geneseqp_embl_AA1991.DAT:* SIDSI_gcadata/geneseq_geneseqp_embl_AA1992.DAT:* SIDSI_gcadata/geneseq_geneseqp_embl_AA1991.DAT:* SIDSI_gcadata/geneseq_geneseqp_embl_AA1991.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

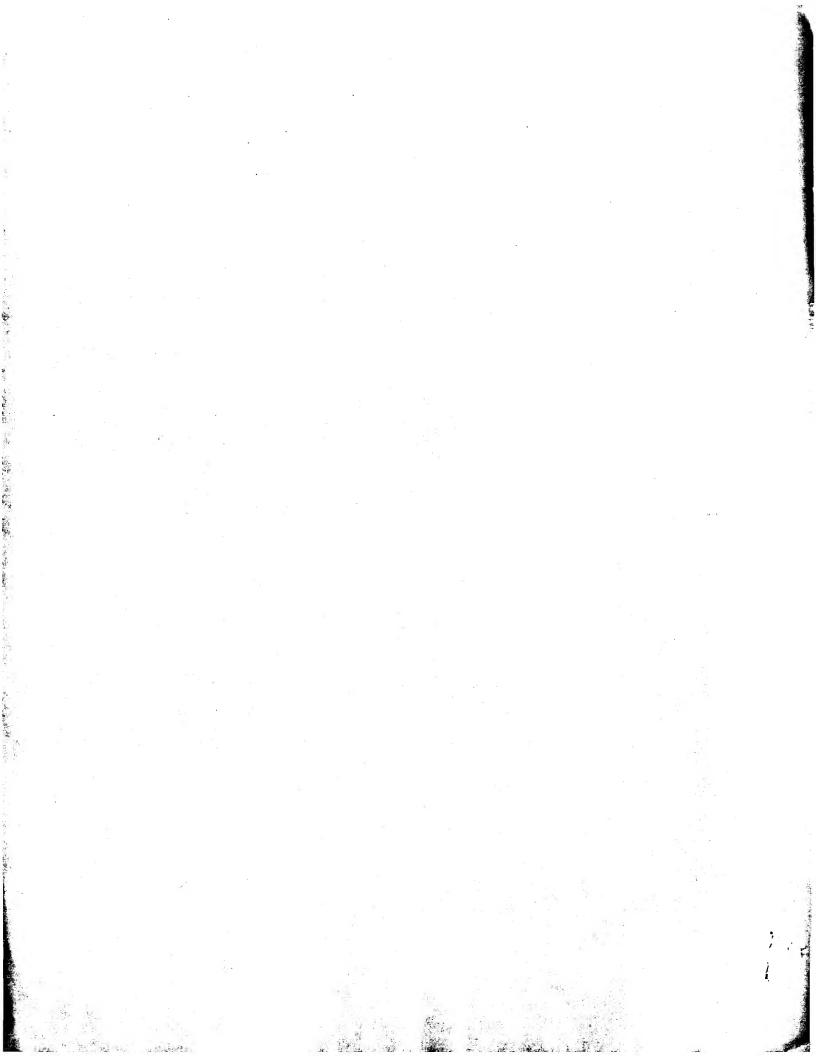
SUMMARIES

	Description	Synthetic immunoge	Synthetic immunoge	Synthetic immunoge	Synthetic immunoge	Synthetic immunode	Synthetic immunoge	LHRH-containing im	LHRH-containing im	LHRH-containing im
	ID	1	AAU11424	AAU11420	AAU11430	AAU11431	AAU11429	AAR62705	AAR62708	AAR62707
	DB	23	23	23	23	23	23	15	15	15
	Query Match Length DB	47	34	31	46	51	20	25	42	27
æ		99.2	8.69	64.1	59.5	58.1	57.1	47.2	47.2	46.8
	Score	246	173	159	147.5	144	141.5	117	117	116
	Result No.	1	7	e	4	5	9	7	80	6

MVF Th epitope/LHR Peptide immunogen LHRH-containing im Modified MVF Th ep	MVF Th MVF Th	Modified MVF The prodicted immunogen Modified MVF The prodiction WVF The prodiction WVF The production obtains for the production obtains to be produced to the production of	Syntheric cinimer I Measles virus fusi Modified MVF Th ep Peptide Immunogen Inv epitope/modifi	Peptide immunogen Modified MVF Th ep	Peptide immunogen Modified MVF Th ep Frizzled putative Synthetic chimer f Frizzled putative IMRH-containing im		4-repea 4-repea -2. Syn Ide horm copy gc analogu
AAY91156 AAX68567 AAR62721 AAY91163	1007	AAYS1165 AAY68573 AAY91179 AAY91158	AAW0/201 AAY79986 AAY91173 AAY91180	AAY68583 AAY91177 AAY91170	AAY68575 AAY91242 ABP72235 AAW67582 ABP72236 AAR62726	AAY62728 AAY61183 AAY68586 AAY91159	AANO3944 AAW79567 AAW61542 AAY58363 AAY58135 AAW03943
21 21 15	217 21 21 21 21 21 21 21 21 21 21 21 21 21	21777	2177	21 21 21 21 21 21 21 21 21 21 21 21 21 2	21 24 24 15	12 21 21 21 21 21 21	17 19 21 21 17
27 27 45	31 27 27 27	3 4 4 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	31 31 47	44 49 72	27 27 20 20 20 20 20	2444 2444 284 284	1444444 10000004
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110	11 11 11 11 11	17 18 20 21	7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7	25 27 28 28	29 31 32 34	33 33 33 34 35 36 37	v0-4016410

ALIGNMENTS

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Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                           /label= OTHER
/note= "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                              "Gonadotrophin releasing hormone epitope
                                                                                                                                                                                                                                                                                                                                                                           "Malaria CSP protein (288-302 aa)"
                                                                                                                                                                                                                                                                                                 1..10
/note= "Gonadotrophin rel
(1..10 aa)"
11..16
/note= "Spacer peptide"
/note= "Malaria CSP prote
35..38
                                                                                                                                                                                                                                                    Location/Qualifiers
                          AAU11428 standard; peptide; 47 AA.
                                                                                                                                                                                                   Chimeric - Plasmodium falciparum.
Chimeric - Mammalia.
Synthetic.
                                                                                                  Synthetic immunogen peptide 9.
                                                                           12-MAR-2002 (first entry)
                                                                                                                                                                                                                                                    Key
Misc-difference
                                                   AAU11428;
                                                                                                                                                                                                                                                                                                   Peptide
                                                                                                                                                                                                                                                                                                                                          Peptide
                                                                                                                                                                                                                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                                                                                                                        Peptide
RESULT 1
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cell fusion glycoprotein precursor - phocine distemper virus (strain Ulster/88)
N;Contains: fusion protein F1; fusion protein F2
C;Species: phocine distemper virus
C;Date: 17-Feb-1994 #sequence_revision 17-Feb-1994 #text_change 25-Oct-1996
C;Accession: A48346
K;Curran, M.D.; Lu, Y.J.; Rima, B.K.
Arch. Virol. 126, 159-169, 1992
A;Ritle: The fusion protein gene of phocine distemper virus: nucleotide and deduced a A;Reference number: A48346; MUID:92398437; PMID:1524494
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        cell fusion glycoprotein precursor - phocine distemper virus
N;Contains: fusion protein F1; fusion protein F2
C;Species: phocine distemper virus
C;Date: 30-Sep-1992 #sequence_revision 30-Sep-1992 #text_change 25-Oct-1996
C;Accession: 701368
R;Koevamees, J.; Blixenkrone-Moeller, M.; Sharma, B.; Oervell, C.; Norrby, E.
J. Gen. Virol. 72, 2959-2966, 1991
A;Title: The nucleotide sequence and deduced amino acid composition of the haemaggluth A;Reference number: J01368; MUID: 92113538; PMID:1765768
                                                                                     A, Description: Vaccination of mice against canine distemper virus induced encephaliting the farence number: $21382
A; Reference number: $21382
A; Accession: $21382
A; Accession: $21382
A; Molecule type: genomic RNA
A; Rolecule type: genomic RNA
A; Residues: 1-662 <WILL>
A; Coss.references: BMBL:X65509; NID:958853; PIDN:CAA46481.1; PID:958854
C; Superfamily: parainfluenza virus cell fusion protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A;Gene: F
C;Superfamily: parainfluenza virus cell fusion protein
C;Superfamily: parainfluenza virus cell fusion; transmembrane protein
C;Superfamily: parainfluenza proprotein; z #status predicted <FP2>
F;18-166/Domain: transmembrane #status predicted <TM1>
F;189-105/Pomain: cleavage processing #status predicted <FP1>
F;189-631/Product: cell fusion glycoprotein F1 #status predicted <FP1>
F;194-212/Domain: transmembrane #status predicted <TM2>
F;575-595/Domain: transmembrane #status predicted <TM3>
F;110,142,148,486/Binding site: carbohydrate (Asn) (covalent) #status predicted
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C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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                      Spehner, D.; Villeval, D.; Drillien,
Library, April 1992
                                                                                                                                                                                                                                                                                                                                                                                                                  Length 662
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                                                                                                                                                                                                                                                                                                                                                                                                                  DB 2;
                                                                                                                                                                                                                                                                                                                                                                                                               Score 66; DB 2, Pred. No. 3.5; 1; Mismatches
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Pred. No. 4.4;
2; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    15 SLKLLSEIKGVIVHRLEGV 33
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                             Spehner,
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68.4%;
                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 26.6%;
Best Local Similarity 73.7%;
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A; Molecule type: genomic RNA A; Residues: 1-631 <KOV>
                      R;Wild, T.F.; Bernard, A.; submitted to the EMBL Data
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
Best Local Similarity
Matches 13; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A; Molecule type: mRNA
A; Residues: 1-631 <CUR>
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C; Accession:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C; Genetics:
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   cell fusion glycoprotein precursor - rinderpest virus (strain L)
N;Contains: fusion glycoprotein F1; fusion glycoprotein F2
C;Species: rinderpest virus
C;Species: rinderpest virus
C;Date: 30-Sep-1989 #sequence_revision 30-Sep-1989 #text_change 16-Jul-1999
C;Accession: A28921
R;Tsukiyama, K: Yoshikawa, Y:; Yamanouchi, K.
Virology 164, 523-530, 1988
A;Title: Fusion glycoprotein (F) of rinderpest virus: entire nucleotide sequence of the A;Refearence number: A28921; MUID:88219541; PMID:3285575
A;Accession: A28921
A;Molecule type: mRNA
A;Refearence number: A28921; MUID:88219541; PMID:3285575
A;Accession: A28921
A;Molecule type: mRNA
A;Refearence number: GB:M20870; NID:g333898; PIDN:AA47399.1; PID:g333899
C;Genetics: A;Genetics: A38921; membrane fusion; transmembrane protein
C;Superfamily: parainfluenza virus cell fusion prodein
C;Superfamily: parainfluenza virus cell fusion; transmembrane predicted <FG2>
F;105-46/Product: cell fusion glycoprotein F2 #status predicted <FG1>
F;109-133/Domain: transmembrane #status predicted <TM1>
F;109-133/Domain: transmembrane #status predicted <TM1>
F;25,57,63/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cell fusion glycoprotein precursor - canine distemper virus

N;Contains: fusion protein F1; fusion protein F2
C;Species: canine distanger virus
C;Date: 30-Uun-1991 #sequence_revision 30-Jun-1991 #text_change 16-Jul-1999
C;Accession: JS0321
R;Barrett, T.; Clark, D.K.; Evans, S.A.; Rima, B.K.
Virus Res. 8, 373-386, 1987
A;Title: The nucleotide sequence of the gene encoding the F protein of canine distemper A;Recession: JS0321; MUID:88129050; PMID:3433924
A;Recession: JS0321
A;Molecule type: mRNA
A;Recession: JS0321; MUID:88129050; PMID:3433924
A;Recession: JS0321
A;Molecule type: mRNA
A;Recession: JS0321
A;Genetics:
A;Coss-references: GB:M21849; NID:g323241; PIDN:AAA42878.1; PID:g323242
A;Coss-references: GB:M21849; NID:g323241; PIDN:AAA42878.1; PID:g323242
C;Genetics:
A;Genetics:
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C;Species: canine distemper virus
C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 24-Nov-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
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Pred. No. 3.5;
1; Mismatches
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93.3%;
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Local Similarity 73.7%;
nes 14; Conservative
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Best Local Similarity 93.3
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   19 LSEIKGVIVHRLEGV
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Best Local S
Matches 14
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08:59:00 2003

Thu Sep 25

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C;Accession: S47034
R;Bolt, G.; Gottschalck, E.; Blixenkkrone-Woeller, M.; Wishaupt, R.G.A.; Welsh, M.C.; submitted to the EMBL Data Library, July 1994
A;Description: Nucleotide sequence comparisons of the F and M genes of cetacean momba;Reference number: S47034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C;Species: phocine distemper virus
C;Species: phocine distemper virus
C;Date: 14-Jul-1994 #sequence_revision 14-Jul-1994 #text_change 24-Nov-1999
C;Accession: JQ2223
S;Visser, I.K.G.; van der Heijden, R.W.J.; van de Bildt, M.W.G.; Kenter, M.J.H.; OŒTVI
Gen. Virol. 74, 1989-1994, 1993
A;Title: Fusion protein gene nucleotide sequence similarities, shared antigenic sites
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1;
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F;105-135/Pegion: hydrophobic
F:486-512/Domain: transmembrane #status predicted <TMM>
F;21.53,59,397/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                     C;Species: porpoise morbillivirus
C;Date: 19-Mar-1997 #sequence_revision 19-Mar-1997 #text_change 24-Nov-1999
                                                                                                                                                                                                                                                                                                                                                                                                                               A Molecule type: mRNA
A; Residues: 1-552 < BOL>
A; Cross-references: EMBL:X80757; NID:9520639; PIDN:CAA56731.1; PID:9520640
A; Cross-references: EMBL:X80757; NID:9520640
A; Experimental source: isolate Ulster 88
A; Note: the source is designated as Cetacean morbillivirus
C; Superfamily: parainfluenza virus cell fusion protein
F;1-25/Domain: signal sequence %status predicted <BIG>
F;26-552/Product: fusion protein #status predicted <MAI>
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A;Note: the authors translated the codon ATC for residue 4 as Leu
C;Comment: This fusion protein F0 is cleaved into F1 and F2 chains.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 542
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    e virus entity.
A;Reference number: JQ2223; MUID:93389459; PMID:8376973
                                                                                                                                            cell fusion protein precursor - porpoise morbillivirus N; Alternate names: F protein
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Pred. No. 2.8;
1; Mismatches
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Pred. No. 2.5;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15 SLKLLSEIKGVIVHRLEGV 33
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61.5%;
284 LSEIKGVIIHRLEGV 298
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Best Local Similarity 73.7'
Matches 14; Conservative
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Best Local Similarity 61.5
Matches 16; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Molecule type: mRNA
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                                                                                                                                                                                                                                                                                                                                                                                                          A; Accession: S47034
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                                                                                      RESULT 9
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VGNERK

Cell fussion glycoprotein precursor - rinderpest virus (strain Kabete O)
N;Contains: fusion glycoprotein F1; fusion glycoprotein F2
C;Species: Inderpest virus
C;Species: Inderpest virus
C;Date: 31-Dec-1989 #sequence_revision 31-Dec-1989 #text_change 25-Oct-1996
C;Accession: A31051
R;Hsu, D; Yamanaka, M; Miller, J; Dale, B; Grubman, M; Yilma, T.
Virolagy 166, 149-153, 1988
A;Title: Cloning of the fusion gene of rinderpest virus: comparative sequence analysis w
A;Reference number: A31051; MUID:88322864; PMID:3413983
A;Accession: A31051
A;Residues: 1-546 <HSU>
C;Generic F2
A;Residues: 1-546 <HSU>
C;Generic F3
A;Residues: 1-540 <HSU>
C;Generic F3
A;Gene: F4
C;Superfamily: parainfluenza virus cell fusion protein
C;Keywords: glycoprotein; membrane fusion; transmembrane protein
C;Keywords: glycoprotein; membrane fusion; Tansmembrane predicted <FF1>
F;20-108/Product: cell fusion glycoprotein F1 #status predicted <FF2>
F;109-134/Domain: transmembrane #status predicted <TN2>
F;109-134/Domain: transmembrane #status predicted <TN2>
F;25,57,63,518/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           C.Species: rinderpest virus
C.Species: rinderpest virus
C.Date: 20-Oct-1994 #sequence_revision 08-Sep-1995 #text_change 20-Sep-1999
C.Date: 20-Oct-1994 #sequence_revision 08-Sep-1995 #text_change 20-Sep-1999
C.Date: 20-Oct-1994 #sequence virus, March 1994
B.Baron, M.D.; Barrett, T.
Submitted to the EMBL Data Library, March 1994
A.Bestription: The sequence of the N and L genes of Rinderpest virus, and the 50 and 30
A.Reference number: S47283
A.Accession: S47305.
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A; Residues: 1-546 <BAR>
A; Cross-references: EMBL:230697; NID:9535396; PIDN:CAA83181.1; PID:9535401; EMBL:230700;
C; Superfamily: parainfluenza virus cell fusion protein
C; Keywords: transmembrane protein
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                          F;1-25/Domain: signal sequence #status predicted <SIG>
F;26-110/Product: cell fusion glycoprotein F2 #status predicted <FF2>
F;111-553/Product: cell fusion glycoprotein F1 #status predicted <FF1>
F;501-517/Domain: transmembrane #status predicted <TMN>
F;32,64,70/Binding site: carbohydrate (Asn) (covalent) #status predicted
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0
  C; Keywords: glycoprotein; membrane fusion; transmembrane protein
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Pred. No. 0.68;
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Best Local Similarity 93.3'
Matches 14; Conservative
                                                                                                                                                                                                                                                             Conservative
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es 15; Conserv
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Matches
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VGNZRK
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cell fusion glycoprotein precursor - measles virus (strain AIK-C)
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Best Local Similarity 100.
Matches 15; Conservative
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A; Residues: 272-553 <SCH2>
                                                                                                                                                                                                                                                                                                                                                     A; Molecule type: genomic RNA
A; Residues: 1-550 <MOR>
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                                                                                      Contains: fusion glycoprotein precursor - subacute sclerosing panencephalitis virus (strain Y N; Contains: fusion glycoprotein F; fusion glycoprotein F2
C; Species: subacute sclerosing panencephalitis virus, SSPEV
C; Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 16-Jun-2000
C; Accession: JU0274
R; Komase, K.; Haga, T.; Yoshikawa, Y.; Sato, T.A.; Yamanouchi, K.
N; Haga, T.; Yoshikawa, Y.; Sato, T.A.; Yamanouchi, K.
N; Haga, T.; Yoshikawa, Y.; Sato, T.A.; Yamanouchi, K.
N; Reference number: JU0274
A; Reference number: JU0274; MUID:90385702; PMID:1698327
A; Ression: JU0274
A; Molecule type: mRNA
A;
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G.Species: rinderpest virus

C.Species: rinderpest virus

C.Date: 06-Jan-1995 #sequence_revision 06-Jan-1995 #text_change 15-Oct-1999

C.Accession: 847300; P00865

R.Evans, S.A.; Baron, M.D.; Chamberlain, R.W.; Goatley, L.; Barrett, T.

R.Evans, S.A.; Baron, M.D.; Chamberlain, R.W.; Goatley, L.; Barrett, T.

A.Bescription: The complete nucleotide sequence of the fusion protein gene of the vaccin

A.Accession: 847300
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A; Residues: 1-546 <-EVAN-
A; Residues: 1-546 <-EVAN-
A; Creamberlain, R.W.; Wamwayi, H.M.; Hockley, E.; Shaila, M.S.; Goatley, L.; Knowles, N.J.
Gen. Virol. 74, 2775-2780, 1993
A; Title: Evidence for different lineages of rinderpest virus reflecting their geographic
A; Reference number: PQ0865; MUID:94103786; PMID:8277286
A; Accession: PQ0865
A; Residues: 86-191 <-EVAN-
C; Genetics: Reference number: PQ0865; MUID:94103786; PMID:8277286
A; Residues: Reference number: PQ0865; MUID:94103786; PMID:8277286
C; Genetics: Reference number: PQ0865
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C;Superfamily: parainfluenza virus cell fusion protein
C;Keywords: glycoprotein; membrane fusion; transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           29.0%; Score 72; DB 1; Length 534; 100.0%; Pred. No. 0.5; Live 0; Mismatches 0; Indels
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RESULT, 5

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A; Molecule type: mRNA
A; Residues: 1-553 <BUC>
A; Residues: 1-553 <BUC>
A; Experimental source: Strain Halle
A; Experimental source: Strain Halle
B; Richardson, C.; Hull, D.; Greer, P.; Hasel, K.; Berkovich, A.; Englund, G.; Bellini
A; Title: The nucleotide sequence of the mRNA encoding the fusion protein of measles v
A; Reference number: A94350; MUID: 87071668; PMID: 3788062
A; Accession: A25616
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A;Reference number: A92794; MUID:87224816; PMID:3585281
                                                                                                                  R;Mori, T.; Sasaki, K.; Hashimoto, H.; Makino, S.
Virus Genes 7, 67-81, 1993
A;Title: Molecular cloning and complete nucleotide sequence of genomic RNA of the AIK
A;Reference number: A48556; MUID:93227570; PMID:8470368
A;Accession: E48556
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R; Schulz, T.F.; Hoad, J.G.; Whitby, D.; Tizard, E.J.; Dillon, M.J.; Weiss, R.A.
J. Gen. Virol. 73, 1581-1586, 1992
A; Title: A measles virus isolate from a child with Kawasaki disease: sequence comparative enumber: PQ0374; MUID:92300360; PMID:1607874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
C;Species: measles virus
C;Date: 17-Feb-1994 #sequence_revision 17-Feb-1994 #text_change 16-Jul-1999
C;Accession: E48556
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C;Species: measles virus
C;Decties: measles virus
C;Decte: 31-Mar-1988 #sequence_revision 31-Mar-1989 #text_change 16-Jun-2000
C;Accession: A26962; A25616; PQ0380; PQ0384
C;Accession: A26962; A25616; PQ0380; PQ0384
S;Buckland, R; Gerald, C.; Barker, R.; Wild, T.F.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A Gene: F
C; Superfamily: parainfluenza virus cell fusion protein
C; Superfamily: parainfluenza virus cell fusion; transmembrane protein
C; Keywords: glycoprotein; membrane fusion; transmembrane protein
C; Keywords: signal sequence #status predicted <SIG>
F; 123-107/Product: cell fusion glycoprotein F2 #status predicted <FF2>
F; 108-550/Product: cell fusion glycoprotein F1 #status predicted <FF1>
F; 113-138/Region: hydrophobic
F; 113-138/Region: hydrophobic
F; 1495-514/Domain: transmembrane #status predicted <TMM>
F; 6, 29, 61, 67/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                         A;Cross-references: GB:S58435; NID:g299460; PIDN:AAB26145.1; PID:g299465 A;Note: sequence extracted from NCBI backbone (NCBIN:129264, NCBIP:129272) C;Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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A;Residues: 4-553 <RIC>
A;Cross-references: GB:M14915; NID:g331762; PIDN:AAA46423.1; PID:g331763
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C;Superfamily: parainfluenza virus cell fusion protein
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September 24, 2003, 17:30:06; Search time 16.5346 Seconds (without alignments) 273.361 Million cell updates/sec
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248
1 XHWSYGLRPGSSGPSLKLLS.....HRLEGVEGPSLHWSYGLRPX 47
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GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
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Maximum Match 100%
Listing first 45 summaries
                                                                  OM protein - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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Maximum DB seq length: 2000000000
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1: pir1:*
2: pir2:*
3: pir3:*
4: pir4:*
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Perfect score:
Sequence:
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SUMMA ID	P00338 JU0274 P00338 JU0274 S47306 P00223 VGNZRL S47036 S47035 S47036 S21382 VGNZRL VGNZRL VGNZRL VGNZRL S21382 J178541 I178541 I178541 I136589 R136589 R136589 R136589 R136589 R136589 R136589 R136589 R136589 R136589
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Length	282 282 282 282 284 285 285 285 285 285 285 285 285 285 285
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Result No.	10 0 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

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	glycoprotein easles virus pr.1993 #seq pr.1993 #seq pr.00376 F. 73, 1581-easles virus number: Pp03* Pp	lycoprotei ar-1993 #se pQ0388 .; Hoad, J .; 73, 1581 asles viru umber: PQ0 pe: genomi -282 <sch> : parainfi lycoprotei lycoprotei LSEIKGVIV LSEIKGVIV</sch>
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	RESULT 1 PQ0376 cell fusic C; Species C; Date: 17 C; Accessic R; Schulz, J; Gen. 2, J; Gen. 2, A; Title: R A; Referen A; Accessic A; Accessic A; Accessic A; Accessic A; Accessic C; Genetics A; Genetics C; Genet	RESULT FQ0388 Coll f Co

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

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### SENERAL INFORMATION:
### SAPPLICANT: Stephen D. Acres
### APPLICANT: Stephen D. Acres
#### APPLICANT: Stephen D. Acres
### TITLE OF INVENTION: METHODS OF RAISING ANIMALS FOR MEAT PRODUCTION
### FILE REPERENCE: 9001-005-05-05
### CURRENT APPLICATION NUMBER: US 60/084,217
### CURRENT PAPLICATION NUMBER: US 60/084,217
### CURRENT PAPLICATION NUMBER: US 60/084,217
### SEALIER PAPLICATION NUMBER: U
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amino acid
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Publication No. US20030165500A1

GENERAL INFORMATION:

APPLICANT: Rhee, Chae-Seo

APPLICANT: Malini, Sen

APPLICANT: Wu, Christina

APPLICANT: Corr, Maripat

APPLICANT: The Regents of the University of California

TITLE OF INVENTION: Wh and Frizzlad Receptors as Targets for Immunotherapy

TITLE OF INVENTION: In Head and Neck Squamous Cell Carcinomas

TITLE OF INVENTION: In Head and Neck Squamous Cell Carcinomas

FILE REFERENCE: 023070-130320US

CURRENT APPLICATION NUMBER: US 60/287,995

PRIOR APPLICATION NUMBER: US 60/287,995

PRIOR APPLICATION NUMBER: WO PCT/US02/13802

PRIOR FILING DATE: 2002-05-01

PRIOR FILING DATE: 2002-05-01

SOFTWARE: PatentIN Ver. 2.1

SEO ID NO 231

LENGTH: 75

TENGTH: 75

TENGTH: 75
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                                                                                                                                                                                     Gaps
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                                                                                                                          Query Match 40.7%; Score 101; DB 11; Length 75; Best Local Similarity 91.3%; Pred. No. 1.5e-05; Matches 21; Conservative 1; Mismatches 1; Indels
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APPLICANT: HARLAND, RICHARD
APPLICANT: MANNS, JOHN G.
APPLICANT: ACRES, STEPHEN D.
TITLE OF INVENTION: IMMUNIZATION AGAINST ENDOGENOUS
TITLE OF INVENTION: MOLECULES
NUMBER OF SEQUENCES:
GCORRESPONDENCE ADDRESS:
ADDRESSE: ROBINS & ASSOCIATES
STREET: 90 MIDDLEFIELD ROAD, SUITE 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
40.7%; Score 101; DB 12;
Best Local Similarity 91.3%; Pred. No. 1.5e-05;
Matches 21; Conservative 1; Mismatches 1;
                                                                                                                                                                                                                               16 LKLLSEIKGVIVHRLEGVEGPSL 38
                                                                                                                                                                                                                                                         1 MKLLSLIKGVIVHRLEGVEGPSL 23
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence 4, Application US/09019010
Patent No. US20010014330A1
ORGANISM: Artificial Sequence
                                                 ; OTHER INFORMATION: PMMVF-FZD2
US-09-847-102A-33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ORGANISM: Artificial Sequence
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                                                                                                                                                                                                                                                                                                                                                                                US-10-285-976-231
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                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
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Gaps
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## Sequence 11, Application US/09305924A

## Publication No. US20030091579A1

## Sequence 11, Application US/09305924A

## Publication No. US20030091579A1

## APPLICANT: Jack G. Manns

## APPLICANT: Stephen D. Acres

## APPLICANT: Stephen D. Acres

## APPLICANT: Richard Harland

## TITLE OF INVENTION: METHODS OF RAISING ANIMALS FOR MEAT PRODUCTION

## FILE REFERENCE: 9001-0048

## CURRENT FILING DATE: 1999-05-05

## EARLIER APPLICATION NUMBER: US 60/084,217

## EARLIER FILING DATE: 1998-05-05

## NUMBER OF SEQ ID NOS: 14

## SOFTWARE: Patentin Ver. 2.0

## SEQ ID NOS: 14

## SEQ ID NOS: 14
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 HWSYGLRPGSGSQDWSY-----GLRPGGSSQHWSYGLRP 35
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                                                                                                                                                                 SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/019,010
FILING DATE: 05-FEB-1998
CLASSIFICATION DATA:
PRIOR APPLICATION NUMBER: US/09/019,010
APPLICATION NUMBER: US/09/019,010
APPLICATION NUMBER: US/09/019,010
APPLICATION NUMBER: US/09/05,883
FILING DATE: 05-FEB-1997
ATTOREX/ACENT INFORMATION:
NAME: MCCRACKEN, THOMAS PREGISTRATION NUMBER: 38,548
REGISTRATION NUMBER: 38,548
REGISTRATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION OF 4:
SEQUENCE (650) 325-7812
INFORMATION FOR SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
CURRENT OF SEQ ID NO: 4:
SEQUENCE CHARACTERISTICS:
CURRENT OF SEQ ID NO: 4:
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Pred. No. 3.4e-05;
1; Mismatches 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 96.5; DB 9;
Pred. No. 3.4e-05;
1; Mismatches 10;
                                                                                     COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      38.9%;
44.7%;
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Best Local Similarity 44.7%;
Matches 21; Conservative
                                               MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                21; Conservative
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; MOLECULE TYPE: protein
US-09-019-010-4
COMPUTER READABLE FORM:
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3

5

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Gaps

24;

Indels

Length 75;

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APPLICANT: Malini, Sen
APPLICANT: Malini, Sen
APPLICANT: Malini, Sen
APPLICANT: Malini, Sen
APPLICANT: Leoni, Lorenzo M.
APPLICANT: Carson, Dennis A.
APPLICANT: Carson, Dennis A.
APPLICANT: Carson, Dennis A.
APPLICANT: The Regents of the University of California
TITLE OF INVENTION: What and Frizzled Receptors as Targets for Immunotherapy
TITLE OF INVENTION: What and Frizzled Receptors as Targets for Immunotherapy
TITLE OF INVENTION: What and Frizzled Receptors as Targets for Immunotherapy
TITLE OF INVENTION: Whater: US 02000S
CURRENT FILING DATE: 2002-11-01
PRIOR APPLICATION NUMBER: US 60/287,995
PRIOR FILING DATE: 2002-05-01
PRIOR APPLICATION NUMBER: WO PCT/US02/13802
PRIOR FILING DATE: 2002-05-01
NUMBER OF SEQ ID NOS: 232
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 229
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Carson, Dennis A.
APPLICANT: Carson, Maripat
APPLICANT: Rhee, Chae-Seo
APPLICANT: Lorenzo, Leeni M.
APPLICANT: Malini, Sen
TITLE OF INVENTION: IMMONOLOGIC COMPOSITIONS AND METHODS FOR
TITLE OF INVENTION: IMMONOLOGIC COMPOSITIONS AND METHODS FOR
TITLE OF INVENTION: STUDYING AND TREATING CANCERS EXPRESSING FRIZZLED ANTIGENS
FILE REFERENCE: 22000-20629.00
CURRENT APPLICATION NUMBER: US/09/847,102A
CURRENT APPLICATION NUMBER: US/09/847,102A
CURRENT FILING DATE: 2001-05-01
NUMBER OF SEQ ID NOS: 138
SOFTWARE: FastSEQ for Windows Version 4.0
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23 GLQPGAGGTPGGPGGGGAPPRYATLEHPFHCGPSLKLLSLIKGVIVHRLEGVE 75
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23 GLQPGAGGTPGGPGGGGAPPRYATLEHPFHCGPSLKLLSLIKGVIVHRLEGVE 75
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                                                                                                                                                                                                                                    ---GPSLKLLSEIKGVIVHRLEGVE 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    OTHER INFORMATION: Description of Artificial Sequence:PFZD2-MMVF; OTHER INFORMATION: measles virus fusion (MVF) epitope fused to US-10-285-976-228
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
41.1%; Score 102; DB 12;
Best Local Similarity 47.2%; Pred. No. 1.1e-05;
Matches 25; Conservative 2; Mismatches 2;
                                                                            Score 102; DB 11;
Pred. No. 1.1e-05;
2; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 229, Application US/10285976
Publication No. US20030165500A1
GENERAL INFORMATION:
APPLICANT: Rhee, Chae-Seo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 33, Application US/09847102A
publication No. US2003004409Al
GENERAL INFORMATION:
APPLICANT: University of California
                                                                                   41.18;
47.28;
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                                                                            Query Match
Best Local Similarity 47.2<sup>3</sup>
Matches 25; Conservative
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US-10-285-976-229
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US-09-847-102A-33
           US-09-847-102A-31
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LENGTH: 75
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Sequence 31, Application US/09847102A

Publication No. US20030044409A1

GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Carson, Dennis A.
APPLICANT: Corr, Maripat
APPLICANT: Corr, Maripat
APPLICANT: Lorenzo, Leoni M.
APPLICANT: Lorenzo, Leoni M.
APPLICANT: Malini, Sen
TITLE OF INVENTION: IMMUNOLOGIC COMPOSITIONS AND METHODS FOR
TITLE OF INVENTION: STUDYING AND TREATING CANCERS EXPRESSING FRIZZLED ANTIGENS
FILE REFERENCE: 22000-20659.00
CURRENT APPLICATION NUMBER: US/09/847,102A

CURRENT APPLICATION NUMBER: 2001-05-01

NUMBER OF SEQ ID NOS: 138

SOFTWARE: FastSEQ for Windows Version 4.0

SEQ ID NO 31

LENTH: 75
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                                                                                                                                                                                                                             Score 116; DB 12; Length 45;
Pred. No. 1e-07;
0; Mismatches 2; Indels
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Best Local Similarity 79.3%; Pred. No. 1.7e-06;
Matches 23; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Bakaletz, Lauren O.
APPLICANT: Raumaya, Pravin T.P.
TITLE OF INVENTION: Synthetic Chimeric Fimbrin Peptides
FILE REFRENCE: 1825/04058
CURRENT APPLICATION NUMBER: US/10/223,711
CURRENT FILING DATE: 2002-08-19
PRIOR APPLICATION NUMBER: 09/148,711
PRIOR FILING DATE: 1998-09-04
PRIOR FILING DATE: 1998-06-02
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Patentin version 3.1
SEQ ID NO 10
INSTITUTE OF SET OF STATE OF STA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6 GLRPGSSGPSLKLLSEIKGVIVHRLEGVE 34
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                                                                                                                                                                                                                                                                                                                                                                      19 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 46
                                                                                                                                                                                                                                                                                                                                                                                                            ; OTHER INFORMATION: synthetic construct US-10-223-711-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-10-223-711-10
; Sequence 10, Application US/10223711
; Publication No. US20030113344A1
; GENERAL INFORMATION:
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ORGANISM: Artificial sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           OTHER INFORMATION: PFZD2-MMVF
                                                                                                                                                                                                                         Query Match
Best Local Similarity 85.7%;
Matches 24; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
ORGANISM: Artificial
                                                                            ; TYPE: PRT
; ORGANISM: Human
US-10-076-674-9
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SEQ ID NO 9
LENGTH: 45
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1;

24; Gaps

Indels

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OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of 1-mm OTHER INFORMATION: GnRH linked by a spacer to amino acid sequence 947-967 of the INFORMATION: anus toxold precursor (Tentoxylyain) protein linked by a space OTHER INFORMATION: o amino acid sequence 2-10 of human GnRH NAME/KEY: MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME/KEY: PEPTIDE LOCATION: (17)...(37)
OTHER INFORMATION: Amino acid sequence 947-967 of the Tetanus toxold precursor 'T OTHER INFORMATION: OXYlysin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: PEPTIDE
LOCATION: (1)..(10)
OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone
NAME/KEY: PEPTIDE
LOCATION: (11)..(16)
OTHER INFORMATION: Spacer peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LOCATION: (42)..(50)
CTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH hormone US-09-848-834A-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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Sublication No. US20030165478A1
GENERAL INFORMATION:
APPLICANT: Sokoll, Kenneth K.
TITLE OF INVENTION: Stabilized Synthetic Immunogen Delivery System
FILE REFERENCE: Immunogen Delivery System
CURRENT APPLICATION NUMBER: US/10/076,674
CURRENT FILING DATE: 2002-04-23
NUMBER OF SEQ ID NOS: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 HWSYGLRPGSSGPSL-----KLLSEIKGVIVHRLEGVEGPSLHWSYGLRP 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          2 HWSYGLRPGSSGPSLFNNFTVSFWLRVPRVSASHL---EGPSLHWSYGLRP 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      6
     2 HWSYGLRPGSSGPSL--KLLSEIK--GVIVHRLEGVEGPSLHWSYGLRP 46
                                   2 HWSYGLRPGSSGPSLDEKKIAKMEKASSVFNVVNSSSGPSLHWSYGLRP 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 141.5; DB 9; Length 50;
Pred. No. 6.7e-11;
1; Mismatches 11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: (1)..(1)
OTHER INFORMATION:
NAME/KEY: MOD_RES
LOCATION: (50)..(50)
OTHER INFORMATION: Amidated glycine or glycinamide
                                                                                                                                                                US-09-848-834A-18
Sequence 18, Application US/09848834A
Sequence 18, Application US/09848834A
Sequence 18, Application US/09848834A
GENERAL INFORMATION:
APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
FRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: PEPTIDE
LOCATION: (38)..(41)
OTHER INFORMATION: Spacer peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              57.18;
58.88;
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Best Local Similarity 58.8
Matches 30; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQ ID NO 18
LENGTH: 50
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ORGANISM: Artificial Sequence
FEATURE:
ORGANISM: Artificial Sequence
FEATURE:
ORGANISM: Artificial Sequence
FEATURE:
OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of human of the information: Inm falciparum circumsporozoite (CSP) protein
OTHER INFORMATION: Ium falciparum circumsporozoite (CSP) protein
NAME/KRI: MOD_RES
LOCATION: (1)...(1)
OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
NAME/KRI: MOD_RES
LOCATION: (51)...(51)
OTHER INFORMATION: Amidated glycine or glycinamide
NAME/KRI: PEPTIDE
LOCATION: (1)...(10)
OTHER INFORMATION: Spacer peptide
NAME/KRI: PEPTIDE
LOCATION: (1)...(16)
OTHER INFORMATION: Circumsporozoite (CSP) protein
NAME/KRI: PEPTIDE
LOCATION: (17)...(36)
OTHER INFORMATION: Circumsporozoite (CSP) protein
NAME/KRI: PEPTIDE
LOCATION: (37)...(42)
OTHER INFORMATION: Spacer peptide
                                                 NAME/KET: PEPTIDE

COTHER INFORMATION: (17). (31)

COTHER INFORMATION: (Tentoxylysin)

NAME/KEY: PEPTIDE

LOCATION: (32)...(37)

NAME/KEY: PEPTIDE

NAME/KEY: PEPTIDE

NAME/KEY: PEPTIDE

COTHER INFORMATION: Spacer peptide

NAME/KEY: PEPTIDE

COTHER INFORMATION: (38)...(46)

COTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH hormone
US-09-848-834A-19
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; LOCATION: (43)..(51)
; TOTER INFORMATION: Amino acid sequence 2-10 of the human GnRH hormone US-09-848-834A-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          4;
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                                                                                                                                                                                                                                                                                                                                                                                                        Length 46;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                               Ouery Match 59.5%; Score 147.5; DB 9; Best Local Similarity 62.5%; Pred. No. 1.1e-11; Matches 30; Conservative 4; Mismatches 7;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 5
US-09-848-834A-20
Sequence 20, Application US/09848834A
Sequence 20, Application US/09848834A
Fatent No. US20020076416A1
GENERAL INFORMATION:
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REPRENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR APPLICATION NUMBER: 60/202,328
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.0
SEQ ID NO 20
LENGTH: 51
LOCATION: (11)..(16)
OTHER INFORMATION: Spacer peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT
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OTHER INFORMATION: Chimeric peptide made up of amino acid sequence 288-302 of the OTHER INFORMATION: asels virus fusion protein, F linked by a spacer peptide to am OTHER INFORMATION: acid sequence 2-10 of the GRRH hormone
                                                                                                                                                                                                                                                                                                                                          LOCATION: (1)..(1)
OTHER INFORMATION: Amidated Lysine
NAME/KEY: PEPTIDE
LOCATION: (1)..(15)
OTHER INFORMATION: Peptide corresponds to the amino acid sequences 288-302 of the
NAME/KEY: PEPTIDE
NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       FEATURE:
OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of hum
OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of hum
OTHER INFORMATION: GRAH linked by a spacer to amino acid sequence 830-844 of Teta
OTHER INFORMATION: toxoid precursor (Tentoxylysin) linked by a spacer to amino acid OTHER INFORMATION: sequence 1-10 of GRAH
LOCATION: (1)...(1)
OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             : LOCATION: (23)...(31)
: OTHER INFORMATION: Peptide corresponds to amino acid sequences 2-10 of the human
: OTHER INFORMATION: GNRH hormone
: NAME/KEY: MOD_RES
: LOCATION: (31)...(31)
: OTHER INFORMATION: Amidated glycine or glycinamide
US-09-848-834A-9
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OTHER INFORMATION: Amidated glycine or glycinamide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match 64.1%; Score 159; DB 9; 1
Best Local Similarity 100.0%; Pred. No. 2.3e-13;
Matches 30; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: Chimeric Peptide Immunogens FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR FILING DATE: 2000-05-05
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.0
SEQ ID NO 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.0
SEQ ID NO 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        US-09-848-834A-19; Sequence 19, Application US/09848834A; Patent No. US20020076416A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCATION: (19)...(22)
OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTIDE
LOCATION: (23)...(31)
                                                                                                                                                             TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT ORGANISM: Artificial Sequence
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                                                                                                                                       LENGTH: 31
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OTHER INFORMATION: RH hormone linked by a spacer to amino acid sequence 288-302 of UTHER INFORMATION: RH hormone linked by a spacer to amino acid sequence 288-302 of UTHER INFORMATION: (1)...(10)
OTHER INFORMATION: Amino acid sequence 1-10 of the human GRRH hormone NAME/KEY: PEPTIDE LOCATION: (11)...(18)
OTHER INFORMATION: Spacer peptide LOCATION: (11)...(34)
OTHER INFORMATION: Amino acid sequence 288-302 of the Measles OTHER INFORMATION: Amino acid sequence 288-302 of the Measles
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                COTHER INFORMATION: Spacer peptide

NAME/FEY: PEPTIDE

LOCATION: (39)...(47)

COTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH hormone US-09-848-834A-17
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                                                                                                                                                                                                           Length 47;
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                                                                                                                                                                                                                                                                                                            2 HWSYGLRPGSSGPSLKLLSEIKGVIVHRLEGVEGPSLHWSYGLRP 46
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    LOCATION: (1)...(1)
    FORMATION: Pyroglutamic acid or 5-oxoproline
US-09-848-848-13

                                                                                                                                                                                                     Query Match 99.2%; Score 246; DB 9; I
Best Local Similarity 100.0%; Pred. No. 3.3e-24;
Matches 45; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SERVERL INFORMATION:

APPLICANT: Aphton Corporation

TITLE OF INVENTION: Chimeric Peptide Immunogens

FITLE OF INVENTION: Chimeric Peptide Immunogens

FILE REFERENCE: 1102865-0047

CURRENT APPLICATION NUMBER: US/09/848,834A

CURRENT FILING DATE: 2001-05-04

PRIOR APPLICATION NUMBER: 60/202,328

PRIOR APPLICATION NUMBER: 60/202,328

NUMBER OF SEQ ID NOS: 20

SOFTWARE: PATENTI VETSION 3.0

SOFTWARE: PATENTI VETSION 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             69.8%; Score 173; DB 9; I
100.0%; Pred. No. 4.3e-15;
iive 0; Mismatches 0;
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TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 HWSYGLRPGSSGPSLKLLSEIKGVIVHRLEGVE 34
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 9, Application US/09848834A Patent No. US20020076416A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 100..
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NAME/KEY: PEPTIDE
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us-09-848-834a-17.rapb

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GenCore version 5.1.6
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OM protein - protein search, using sw model

September 24, 2003, 16:57:10 ; Search time 23.5651 Seconds Run on:

(without alignments)
301.778 Million cell updates/sec

US-09-848-834A-17
248
1 XHWSYGLRPGSSGPSLKLLS......HRLEGVEGPSLHWSYGLRPX Perfect score: Sednence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

Total number of hits satisfying chosen parameters:

566894 seqs, 151307093 residues

Searched:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Listing first 45 summaries Maximum Match 100% Post-processing: Minimum Match 0%

Database

1: /cgol_6/ptodata/2/pubpaa/US07_PUBCOMB.ppp:*
2: /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.ppp:*
3: /cgn2_6/ptodata/2/pubpaa/US06_NWB_PUB.ppp:*
4: /cgn2_6/ptodata/2/pubpaa/US06_NWB_PUB.ppp:*
5: /cgn2_6/ptodata/2/pubpaa/US06_PUBCOMB.ppp:*
6: /cgn2_6/ptodata/2/pubpaa/PCUG2_DUBCOMB.ppp:*
7: /cgn2_6/ptodata/2/pubpaa/US08_NWB_PUB.ppp:*
8: /cgn2_6/ptodata/2/pubpaa/US08_NWB_PUB.ppp:*
9: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.ppp:*
10: /cgn2_6/ptodata/2/pubpaa/US08_PUBCOMB.ppp:*
11: /cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.ppp:*
12: /cgn2_6/ptodata/2/pubpaa/US09_PUBCOMB.ppp:*
13: /cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.ppp:*
14: /cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.ppp:*
15: /cgn2_6/ptodata/2/pubpaa/US10A_PUBCOMB.ppp:*
16: /cgn2_6/ptodata/2/pubpaa/US10_PUBCOMB.ppp:*
17: /cgn2_6/ptodata/2/pubpaa/US10_NWB_PUB.ppp:*
18: /cgn2_6/ptodata/2/pubpaa/US10_NWB_PUB.ppp:*
18: /cgn2_6/ptodata/2/pubpaa/US10_NWB_PUB.ppp:*
18: /cgn2_6/ptodata/2/pubpaa/US60_NWB_PUB.ppp:* Published_Applications_AA:* ••

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	Sequence 17, Appl	Sequence 13, Appl	Sequence 9, Appli	Sequence 19, Appl	Sequence 20, Appl	Sequence 18, Appl	Sequence 9, Appli	Sequence 10, Appl	Sequence 31, Appl	Sequence 229, App	Sequence 33, Appl	Sequence 231, App	Sequence 4, Appli	Sequence 11, Appl	Sequence 13, Appl
ID	US-09-848-834A-17	US-09-848-834A-13	US-09-848-834A-9	US-09-848-834A-19	US-09-848-834A-20	US-09-848-834A-18	US-10-076-674-9	US-10-223-711-10	US-09-847-102A-31	US-10-285-976-229	US-09-847-102A-33	US-10-285-976-231	US-09-019-010-4	US-09-305-924-11	US-09-305-924-13
EQ 1	<u>о</u>	σ	6	6	σ	6	12	15	11	12	11	12	<u>ه</u>	11	11
Query Match Length DB	47	34	31	46	51	20	45	40	75	75	75	75	49		695
Query Match	99.2	69.8	64.1	59.5	58.1	57.1	46.8	42.7	41.1	41.1	40.7	40.7	38.9	38.9	38.9
Score	246	173	159	147.5	144	141.5	116	106	102	102	101	101	96.5	96.5	96.5
Result No.	1	7	m	4	S	9	7	80	σ	10	11	12	13	14	15

111, 7, 11, 11, 11, 11, 11, 11, 11, 11,	Sequence 29, Appl Sequence 3, Appli Sequence 40, Appl Sequence 51, Appl Sequence 51, Appl Sequence 43, Appl Sequence 141, Appl
US-09-964-201 US-09-964-201 US-09-964-201 US-09-848-834A US-09-964-201 US-09-964-201 US-09-964-201 US-09-964-201 US-09-964-201 US-09-964-201 US-09-964-834A US-09-848-834A US-09-848-834A US-09-848-834A US-09-848-834A US-09-848-834A US-09-848-834A US-09-848-834A US-09-848-834A US-09-848-834A US-09-848-834A US-09-848-834A US-09-865-294 US-09-865-294 US-09-865-294 US-09-865-293 US-09-865-293 US-09-865-293 US-09-873-233 US-09-873-233 US-09-873-233	1.1 US-09-865-294-29 1.0 US-10-223-711-3 1.0S-09-747-802-48 1.1 US-09-865-294-40 1.1 US-09-865-294-43 1.1 US-09-865-294-43 1.1 US-09-951-061A-141
	118 118 118 118 118 118 118 118 118 118
0 · · 0000 · · · · · · · · · · · · · ·	69 27.8 69 27.8 69 27.8 66 26.6 66 26.6 66 26.6
88888 944 98999	0 0 4 4 4 4 4 4 5 5 5 5 5 5 5 5 5 5 5 5

ALIGNMENTS

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OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of t_le OTHER INFORMATION: RH hormone linked by a spacer to amino acid sequence 288-302 c OTHER INFORMATION: the Measles virus protein F linked by a spacer to amino acid s OTHER INFORMATION: uence 2-10 of the GRRH hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION: (11)...(18)

OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTIDE
LOCATION: (19)...(34)

OTHER INFORMATION: Amino acid sequence 288-302 of the Measles virus fusion prot=i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION: (1)..(10) OTHER INFORMATION: Amino acid sequence 1-10 of the human GDRH hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: MOD_RES LOCATION: (1)..(1) OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LOCATION: (47)...(47) OTHER INFORMATION: Amidated-glycine or glycinamide
                            Sequence 17, Application US/09848834A
PEREAL No. US20020076416A1
GENERAL INFORMATION:
APPLICANT: Aphton Corporation
TITLE OF INVEWINON: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR FILING DATE: 2000-05-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                        TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                        NUMBER OF SEQ ID NOS: 20 SOFTWARE: Patentin version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: PEPTIDE
US-09-848-834A-17
                                                                                                                                                                                                                                                                                                                                                                                                     SEQ ID NO 17
LENGTH: 47
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us-09-848-834a-17.rsp

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Primary structure of solitary form of gonadotropin-releasing hormone (GnRH) in cichlid pituitary; three forms of GnRH in brain of cichlid and pumpkinsed fish.";
Regul. Pept. 57:43-53(1995).
-: FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS. MAY BE RESPONSIBLE FOR THE REGULATION OF THE HYPOTHALAMIC-PITUITARY-
                                                                                                                                                                                                                                                                                                                                         GON1_HAPBU STANDARD; PRT; 94 AA.
P51918; 093387;
01-007-1996 (Rel. 34, Created)
30-MAY-2000 (Rel. 39, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Gonadoliberin I precursor (Gonadotropin-releasing hormone I) (GRH-I) (LA-RH I) (Luliberin I).
                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Haplochromis burtoni (Burton's mouthbrooder).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Labroidei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A. MEDLINE=95396797; PubMed=7667296; White S.A., Kasten T.L., Bond C.T., Adelman J.P., Fernald R.D.; "Three gonadotropin-releasing hormone genes in one organism suggest
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -!- SUBCELLULAR LOCATION: Secreted.
-!- TISSUE SPECIFICITY: SYNTHESIZED IN PREOPTIC NEURONS AND IS
TRANSPORTED TO THE PITUITARY IN THE PREOPTIC-HYPOPHYSEAL AXONS.
-!- MASS SPECTROMETRY: MW-1113.9; METHOD-MALDI; RANGE-23-32.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MEDLINE=99061842; PubMed=9843638; White R.B., Fernald R.D.; "Ontogeny of gonadotropin-releasing hormone (GnRH) gene expression reveals a distinct origin for GnRH-containing neurons in the
                                                                     ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Powell J.F.F., Fischer W.H., Park M., Craig A.G., Rivier J.E., White S.A., Francis R.C., Fernald R.D., Licht P., Warby C., Sherwood N.M.;
      DB 1; Length 529;
                                                                  Indels
                                                                  ij
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    novel roles for an ancient peptide.";
Proc. Natl. Acad. Sci. U.S.A. 92:8363-8367(1995).
25.8%; Score 64; DB 93.3%; Pred. No. 1.4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -!- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gen. Comp. Endocrinol. 112:322-329(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE=Pituitary;
MEDLINE=95372591; PubMed=7644702;
                                                                                                                                                              EMBL; U31865; AAC59691.1; -.
                                                                                                                           19 LSEIKGVIVHRLEGV 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; AF076961; AAC27716.1;
PIR; I50739; I50739.
                               Best Local Similarity 93.3
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Astatotilapia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 23-32.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GONADAL AXIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Cichlidae; Astato
NCBI_TaxID=8153;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  midbrain.";
                                                                                                                                                                                    291
      Query Match
                                                                                                                                                                                                                                                                                RESULT 15
GON1_HAPBU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GNRH1
                                                                                                                                                                                    임
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PRINTS; PROIS41; GONADOLIBRNI.
PROSITE; PSO0473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus; Signal; Multigene family; Pyrrolidone carboxylic acid.
1 22
                                                                                                                                                                                                                               Gaps
                                                                                                            GNRH ASSOCIATED PEPTIDE I (POTENTIAL).
PYRROLIDONE CARBOXYLIC ACID.
AMIDATION (G-33 PROVIDE AMIDE GROUP).
ENGHRTFKK -> KNUTGHSRNERFL (IN REF. 1).
                                                                                                                                                                                                                                 ;
                                                                                                                                                                                                   Length 94;
                                                                                                                                                                                                                            17; Indels
                                                                                                                                                                       E57DBA83333278D7 CRC64;
                                                                                    PROGONADOLIBERIN I.
                                                                                                                                                                                                   DB 1;
                                                                                                                                                                                                                                                          2 HWSYGLRPGSSGPSLKLLSEIKGVIVHRLEGVEGP 36
                                                                                                                                                                                                                                                                                      57
                                                                                                                                                                                                               0.26;
                                                                                                                                                                                                                                                                                      24 HWSYGLSPGGK-RDLDNFSDTLGNMVEEFPRVEAP
                                                                                                   GONADOLIBERIN
                                                                                                                                                                                                                               2; Mismatches
                                                                                                                                                                                                                                                                                                                               Search completed: September 24, 2003, 17:41:21 Job time: 9.82299 secs
                                                                                                                                                                                                   Score 63.5;
                                                                                                                                                                                                                  Pred. No.
                                                                                                                                                                       10382 MW;
                                                                                                                                                                                                   25.68;
42.98;
                                                                                                                                                                                                                               15; Conservative
Pfam; PF00446; GnRH; 1.
                                                                       222
32
32
32
34
94
                                                                                                                                                                                                                Similarity
                                                                                                                                                                       94 AA;
                                                                                  23
36
32
32
38
86
                                                                                                                                           MOD_RES
CONFLICT
                                                                                                                                                                                                   Query Match
Best Local
                                                                                                               PEPTIDE
MOD_RES
                                                                                                                                                                       SEQUENCE
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SEQUENCE
                                                                    Query Match
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  MOD_RES
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                                                                                                                                                                                                                                                                                                                                          virus)
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                                                                                                                                                                                       RESULT 14
    SET
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                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                          dat. Genet. 23:373-373(1999).
!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES
THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                       "Characterization of single-nucleotide polymorphisms in coding regions
                                                                                                                                                                                                    Cargill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N., Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L., Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.Q.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus; Placenta; Pharmaceutical; Signal; Polymorphism; Pyrrolidone carboxylic acid.

CHAIN
2 PROGONADOLIBERIN I.
PEPTIDE 24 33 GONADOLIBERIN I.
GNADOLIBERIN I.
ACT_SITE 26 26 APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                         Cargill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N., Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L., Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.Q.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GO; GO:0005625; C:soluble fraction; TAS.
GO; GO:0005183; F:luteinizing hormone-releasing factor activity; TAS.
GO; GO:0005183; F:luteinizing hormone-releasing factor activity; TAS.
GO; GO:000725; P:development; TAS.
GO; GO:0007165; P:advelopment; TAS.
GO; GO:0007165; P:asignal transduction of cell proliferation; TAS.
InterPro; IPR004012; GORH.
InterPro; IPR004019; GonadoliberinI.
            Seeburg P.H., Adelman J.P.; "Characterization of cDNA for precursor of human luteinizing hormone releasing hormone."; Nature 311:666-668(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                               -1- SUBCELLUIAR LOCATION: Secreted.
-1- PHARMACEUTICAL: Available under the names Factrel (Ayerst Labs),
Lutrepulse or Lutrelef (Ferring Pharmaceuticals) and Relisorm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
ACTIVITY.
PYRROLIDONE CARBOXYLIC ACID.
                                                                                                                    "The chemical identity of the immunoreactive LHRH-like peptide blosynthesized in the human placenta."; Blochem. Blophys. Res. Commun. 109:1061-1071(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                       MEDLINE-99318093; PubMed-10391209;
                                                                                           MEDLINE=83126573; Pubmed=6760865;
Tan L., Rousseau P.;
 MEDLINE=85012739; PubMed=6090951;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRINTS; PR01541; GONADOLIBRNI.
                                                                                                                                                                                                                                                                                Nat. Genet. 22:231-238(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL, X01059; CAA25526.1; -. EMBL; M12578; AAA35916.1; -. EMBL; X15215; CAA33285.1; -. PIK; S05308; RHHUG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PROSITE; PS00473; GNRH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Genew; HGNC:4419; GNRH1.
MIM; 152760; -.
                                                                                24-33.
                                                                                                                                                                                                                                                                      of human genes
                                                                                                                                                                           VARIANT SER-16
                                                                                                                                                                                                                                                                                                                                                                                                                     HORMONES
                                                                              SEQUENCE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MOD_RES
                                                                                                                                                                                                                                                                                                            ERRATUM
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                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -1- SUBBUNT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2 LINKED BY A DISULFIDE BOND.
-1- SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Schmid A., Spielhofer P., Cattaneo R., Baczko K., Ter Meulen V., Balleter M.A.; Balleter M.A.; Balleter Schrosson Schmid Broad Schrosson Balleter Schrosson Broad Schrosson Br
AMIDATION (G-34 PROVIDE AMIDE GROUP).

W -> S (IN dbsNP:6185).

/FILG-VAR_013943.

3047222218076FA79 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL.
CYTOPLASMIC (POTENTIAL).
LINKAGE BETWEEN F2 & F1 (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Measles virus (strain IP-3-Ca) (Subacute sclerose panencephalitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        VGLF_MEASI STANDARD; PRT; 529 AA.
P26031, 083298.
01-MAY-1992 (Rel. 22, Created)
01-MAY-1992 (Rel. 22, Last sequence update)
16-027-2001 (Rel. 40, Last annotation update)
Fusion 91ycoprotein Precursor (Contains: Fusion 91ycoprotein F2;
                                                                                                                                                                                                                                                                                                                  ó
                                                                                                                                                                                                                           Length 92;
                                                                                                                                                                                                                                                                                                                  10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Virusės; ssRNA negative-strand virusės; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11237;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                POTENTIAL. EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AE987BC9F07E9AA9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BY SIMILARITY.
FUSION GLYCOPROTEIN FO.
                                                                                                                                                                                                                           DB 1;
0.22;
                                                                                                                                                                                                                      Score 64; DB 1; Pred. No. 0.22; 5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROTEIN F1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROTEIN F2
                                                                                                                                                                                                                                                                                                                                                                                                    2 HWSYGLRPGSSGPSLKLLSEIKGVI 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      25 HWSYGLRPGGKRDAENLIDSFQEIV 49
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EMBL; X16566; CAA34568.1; ALT_INIT.
HSSP; P04849; 1SVF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
MEDLINE=92263801; Pubmed=1585658;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR000776; Fusion_gly. Pfam; PF00523; fusion_gly; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ¥.
                                                                                                                                         10380 MW;
                                                                                                                                                                                                                               25.8%;
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                                                                                                                                                                                                                                                                        Best Local Similarity 40.0
Matches 10; Conservative
             33
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                                                                                                                                             92 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                116
140
498
519
             33
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TRANSMEM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A. MEDLINE-89366682; PubMed-2671939; MEDLINE-89366682; PubMed-2671939; Hayflick J.S., Adelman J.P., Seeburg P.H.; The complete nucleotide sequence of the human gonadotropin-releasing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
MEDLINE=86094338; PubMed=2867548;
Adelman J.P., Mason A.J., Hayflick J.S., Seeburg P.H.;
Isolation of the gene and hypothalamic cDNA for the common precursor of gonadotropin releasing hormone and prolactin release inhibiting factor in human and rat.";
                                                                                                                                                                                                                                                                                                                                                    Hormone; Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AMIDATION (G-16 PROVIDE AMIDE GROUP) (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-APR-1988 (Rel. 07, Last Sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
28-FCB-2003 (Rel. 1) (LH-RH I) (LH-RH I) (Gonadotropin-releasing hormone I) (Gonadotropin-releasing hormone I) (Gonadotropin-seleasing hormone I) (Gonadotrolin); GnRH-associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PYRROLIDONE CARBOXYLIC ÁCID (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 64; DB 1; Length 67; Pred. No. 0.16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ACTIVITY (BY SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               505394DAA261A3F2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                         PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Proc. Natl. Acad. Sci. U.S.A. 83:179-183(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                GONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ä.
                                                                                                                                                                                                                                                                                                                                                                                                                       SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SIMILARITY).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nucleic Acids Res. 17:6403-6403(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                HWSYGLRPGSSGPSLKLLSEIKGVI 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues;
Signal, Pyrrolidone carboxylic acid.
NON_TER 1 5 BY SIMI
                                                                                                                                                                                                               PIR; 178541; 178541.
InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                      GONADOLIBRNI.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25.8%;
                                                                                                                                                                                            EMBL; S75918; AAB33096.1; -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7573 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                 Pfam; PF00446; GnRH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                       >67
15
>67
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (Human).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             67 AA;
                                                                                                                                                                                                                                                                                                           PRINTS; PR01541;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=9606;
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P01148;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             hormone I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PEPTIDE
ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                PEPTIDE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                         CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 13
                g
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                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Neuroendocrinology 60:346-359(1994).
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                             InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
Glycoprotein; Fusion protein; Transmembrane; Envelope protein; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-Hypothalamus;
MEDLINE=95124501; PubMed=7545971;
MA Y.J., Costa M.E., Ojeda S.R.;
"Developmental expression of the genes encoding transforming growth factor alpha and its receptor in the hypothalamus of female rhesus
                                                                                                                                                                                                                                                                                                                                                                                                                                                       F2 PROTEIN.
F1 PROTEIN.
LINKAGE BETWEEN F2 & F1 (POTENTIAL).
POTENTIAL.
POTENTIAL.
POTENTIAL.
N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
             SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I) (Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Macaca mulatta (Rhesus macaque).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 65; DB 1; Length 631;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4; Indels
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D1FC87CDD426E9B8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                         FUSION GLYCOPROTEIN FO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-0cr-1996 (Rel. 34, Created)
01-0cr-1996 (Rel. 34, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
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-!- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SLKLLSEIKGVIVHRLEGV 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 68873 MW;
                                                                                                                                                                                                                                                          EMBL; D10371; BAA01206.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26.2%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Cercopithecinae; Macaca
NCBI_TaxID=9544;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GNRHI OR GNRH OR LHRH.
                                                                                                                                                                                                                                                                               PIR; A48346; A48346.
PIR; JQ1368; VGNZPD.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 631 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Similarity
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Best Local Similar
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MEMBRANES.
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                                                                                                                                                                                                                                                                                        VGLF_PHODV
                                                                                                                                           CARBOHYD
CARBOHYD
                                                                          DOMAIN
TRANSMEM
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Norrby E.
                                                                                                                DISULFID
                                                                                                                          CARBOHYD
                                                                                                                                    CARBOHYD
                                                                                                                                                               SEQUENCE
                                                                                                                                                                                                                                                                                               P28886;
                                                                                                       DOMAIN
                                                        CHAIN
                                                CHAIN
                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                                                     RESULT 11
  δλ
                                                                                                                                                                                                                                        qq
                                                                                                                                                                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                     ö
                                       InterPro; IPR000776; Fusion_gly.

Pfam; PF00523; fusion_gly; 1.

Glycoprotein; Fusion protein; Transmembrane; Envelope protein; Signal.

SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Hsu D., Yamanaka M., Miller J., Dale B., Grubman M., Yilma T.; "Cloning of the fusion gene of rinderpest virus: comparative sequence analysis with other morbilliviruses."; Virology 166:149-153(1988).
                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -1- SUBUNIT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2 LINKED BY A DISULFIDE BOND.
-1- SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN
                                                                                                                      LINKAGE BETWEEN F2 & F1 (POTENTIAL).
N-LINKED (GLCNAC. ) (POTENTIAL).
N-LINKED (GLCNAC. ) (POTENTIAL).
N-LINKED (GLCNAC. ) (POTENTIAL).
N-LINKED (GLCNAC. ) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                        01-OCT-1989 (Rel. 12, Created)
01-OCT-1989 (Rel. 12, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Fusion 91ycoprotein Precursor [Contains: Fusion glycoprotein F2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -! - FUNCTION: THIS PROTEIN DIRECTS FUSION OF VIRAL AND CELLULAR
                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                  DB 1; Length 662;
                                                                                                                                                            4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                Rinderpest virus (strain Kabete O) (RDV).
Viruses: SRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBI_TaxID=11242;
                                                                                    FUSION GLYCOPROTEIN FO
                                                                                                                                                                                                                                                                                                                                                       546 AA
                                                                                                                                                                                                                                                                     1; Mismatches
                                                                                                      PROTEIN F1.
                                                                                               PROTEIN F2
                                                                                                                                                                                                                                                  . ov
No.
                                                                                                                 POTENTIAL.
                                                                                                                                                                                                                                                  Score (
                                                                                                                                                                                                                                                                                                                                                       PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. MEDLINE-88322864; PubMed=3413983;
                                                                                                                                                                                                                                                                                                 15 SLKLLSEIKGVIVHRLEGV 33
                                                                                                                                                                                                                               72970 MW;
                                                                                                                                                                                                                                                  26.6%;
73.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; M21514; AAA47400.1; -.
EMBL; M21849; AAA42878.1;
EMBL; X65509; CAA46481.1;
                                                                                                                                                                                                                                                 Query Match 26.6
Best Local Similarity 73.7
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                       STANDARD;
                                                                                    6662
6622
6623
307
1141
179
179
1179
1170
1171
                 PIR; JS0321; VGNZCD.
PIR; S21382; S21382.
HSSP; P04849; 1SVF.
                                                                                                                                                                                                                    662
662 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PIR; A31051; VGNZRK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEMBRANES.
                                                                                                                                                                                                                                                                                                                                                     VGLF_RINDK
P12574;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FAMILY
                                                                                                                                                                      CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                                                                                    CONFLICT
                                                                                                      CHAIN
TRANSMEM
                                                                                                                                  CARBOHYD
                                                                                                                                            CARBOHYD
                                                                                                                                                     CARBOHYD
                                                                                                                                                               CARBOHYD
                                                                                                                         DISULFID
                                                                                                                                                                                                   CONFLICT
                                                                                                                                                                                                             CONFLICT
                                                                                    CHAIN
                                                                                                                                                                                                                                                                                                                                   RESULT 10
VGLF_RINDK
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HSSP; P04849; ISVF.
InterPro: IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
Glycoprotein; Fusion protein; Transmembrane; Envelope protein; Signal.
SIGNAL 1 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-92398437; PubMed-1524494; Curran M.D., Lu Y.J., Rima B.K.; Curran M.D., Lu Y.J., Rima B.K.; "The fusion protein gene of phocine distemper virus: nucleotide and deduced amino acid sequences and a comparison of morbillivirus fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN=Ulster/88;
MEDLINE=20189508; PubMed=2264246;
MEDLINE=20189508; PubMed=2264246;
MEDLINE=201809508; PubMed=2264246;
"Nucleotide sequence analysis of phocine distemper virus reveals its distinctness from canine distemper virus.";
Vet. Rec. 127:430-431(199)
-i- FUNCTION: THIS PROFEIN DIRECTS FUSION OF VIRAL AND CELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     F-2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-DEC-1992 (Rel. 24, Last sequence update)
01-DEC-1992 (Rel. 24, Last sequence update)
16-0CT-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein precursor [Contains: Fusion glycoprotein F2;
Fusion glycoprotein F1].
                                                                                                                                                                                                                                               ARG/LYS-RICH (BASIC).
LINKAGE BETWEEN F2 6 F1 (POTENTIAL)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -!- SUBUNIT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND LINKED BY A DISULFIDE BOND.
                                                                                                                                                                                                                                                                                                 N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "The nucleotide sequence and deduced amino acid composition of haemagglutinin and fusion proteins of the morbillivirus phocid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
STRAIN=ISOlate DK88-4A;
MEDLINE=9213538; PubWed=1765768;
MCOVARNES J., Blixenkrone-Moeller M., Sharma B., Oervell C.,
                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 1; Length 546;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Viruses; ssRNA negative-strand viruses; Mononegavirales; Paramyxoviridae; Paramyxovirinae; Morbillivirus...
                                                                                                                                                                                                                                                                                                                                                                                             476D74DCC18BCFCF CRC64;
                                                                                                                 FUSION GLYCOPROTEIN FO
                                                                                                                                                                                    ARG-RICH (BASIC).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            631 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 65;
Pred. No.
                                                                                                                                                                                                         POTENTIAL.
                                                                                                                                                                                                                                   POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     distemper virus.";
J. Gen. Virol. 72:2959-2966(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Arch. Virol. 126:159-169(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Phocine distemper virus (PDV).
                                                                                                                                                                                                                                                                                                                                                                                             58662 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                        26.2%;
86.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE OF 95-631 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  19 LSEIKGVIVHRLEGV 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                                                                                                                 108
133
513
517
191
25
57
63
                                                                                                                                                                                                                                                                                                                                                                                             546 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STRAIN-Ulster/88;
                                                                                                                                                                                                                                                                                                                                              63
518
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20
109
104
104
484
514
64
64
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PIR; A28921; VGNZRL.
HSSP; P04849; 1SVF.
                                                                                                                                                                                                                                                546 AA;
                                                                                                                                                                                                                                                                                          Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NCBI_TaxID=11233;
                                                                                     20
20
109
1104
1109
484
514
514
57
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FAMILY
                                                                                                  CHAIN
CHAIN
DOMAIN
TRANSMEM
TRANSMEM
                                                                                                                                                                                        DISULFID
                                                                                                                                                                                                                                                SEQUENCE
                                                                                                                                                                                                                                                                           Query Match
                                                                                                                                                                                                       CARBOHYD
                                                                                                                                                                                                                    CARBOHYD
                                                                                                                                                                                                                                CARBOHYD
                                                                                      CHAIN
                                                                                                                                                                                                                                                                                                        Matches
                                                                                                                                                                                                                                                                                          Best
                                                                                                                                                                                                                                                                                                                                                                                                         RESULT
  ò
                                                                                                                                                                                                                                                                                                                                                              QQ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                       ä
                                                                                                                                                                                   PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus; Signal; Multigene family; Pyrrolidone carboxylic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -1- SUBBINIT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2 LINKED BY A DISULFIDE BOND.
-1- SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN
                                                                                                                                                                                                                                                                        GONADOLIBERIN I.
GNRH-ASSOCIATED PEPTIDE I (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                AMIDATION (G-34 PROVIDE AMIDE GROUP)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-88219541; PubMed-3285575;
Tsukiyama K., Yoshikawa Y., Yamanouchi K.;
Tsukiyama K., Yoshikawa Y., Yamanouchi K.;
"Fusion glycoprotein (F) of rinderpest virus: entire nucleotide sequence of the F mRNA, and several features of the F protein.";
Virology 164:522-530(1988).
-i- FUNCTION: THIS PROTEIN DIRECTS FUSION OF VIRAL AND CELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JUL-1989 (Rel. 11, Last sequence update)
116-0cr-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein precursor [Contains: Fusion glycoprotein F2;
Fusion glycoprotein F1].
                                                                                                                                                                                                                                                                                                                                                                                                                       1;
                                                                                                                                                                                                                                                                                                      PYRROLIDONE CARBOXYLIC ACID (BY
                                                                                                                                                                                                                                                                                                                                                                                       Score 68.5; DB 1; Length 95;
Pred. No. 0.061;
3; Mismatches 16; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11243;
                                                                                                                                                                                                                                                                                                                                             (BY SIMILARITY).
61E79C990328D73E CRC64;
                                                                                                                                                                                                                                                            PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                HWSYGLRPGSSGPSLKLLSEIKGVIVHRLEGVEGP 36
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HWSYGLSPGGK-RDLDSLSDTLGDIIERFPHADSP 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   546 AA.
                                                                                                                                                                                                                                                                                                                  SIMILARITY)
                                                                                                                                                                                                                                             POTENTIAL.
                                                                                                                                        InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rinderpest virus (strain L) (RDV).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            01-JUL-1989 (Rel. 11, Created)
01-JUL-1989 (Rel. 11, Last sequ
16-OCT-2001 (Rel. 40, Last anno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; M20870; AAA47399.1; -. '
                                                                                                                                                                                                                                                                                                                                                            10566 MW;
                                                                                                                                                                                                                                                                                                                                                                                       27.6%;
                                                                                                                               EMBL; D86582; BAA13129.1;
                                                                                                                                                                                                                                                                                                                                                                          STANDARD;
                                                                                                                                                                       Pfam; PF00446; GnRH; 1.
                                                                                                                                                                                                                                                           95
95
24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                           95 AA;
                                                                                                                                                                                                                                                                                                                                33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEMBRANES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   RINDL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FAMILY
                                                                                                                                                                                                                                                                                                                                                            SEQUENCE
                                                                                                                                                                                                                                                                                       PEPTIDE
MOD_RES
                                                                                                                                                                                                                                                                          PEPTIDE
                                                                                                                                                                                                                                                                                                                                 MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   VGLF_RI
P10864;
                                                                                                                                                                                                                                             SIGNAL
                                                                                                                                                                                                                                                           CHAIN
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Interprov. IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
Glycoprotein; Fusion protein; Transmembrane; Envelope protein; Signal.
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. MEDLINE-88129050; PubMed=3433924; MEDLINE-88129050; PubMed=3433924; Barrett T.. Clarke D.K., Evans S.A., Rima B.K.; The nucleotide sequence of the gene encoding the F protein of canine distemper virus: a comparison of the deduced amino acid sequence with
                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -!- SUBDATT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2 LINKED BY A DISULFIDE BOND.
-!- SIMILARITY: BELONGS TO THE PARAMIXOVIRUSES FUSION GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MEDLINE-93227696; PubMed-8470428; Maid Tr., Bernard A., Speiner D., Villeval D., Drillien R.; Waccination of mice against canine distemper virus-induced encephalitis with vaccinia virus recombinants encoding measles or
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              VGLE_CDVO STANDARD; PRT; 662 AA.
P12569; Q65991;
D10-CT-1989 (Rel. 12, Created)
O1-OCT-1989 (Rel. 12, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein precursor [Contains: Fusion glycoprotein F1].
                                                                                                                                                                                  POTENTIAL.
ARG/LYS-RICH (BASIC).
LINKAGE BETWEEN F2 & F1 (POTENTIAL).
                                                                                                                                                                                                                                           N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
985029418F28FFB5 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Vaccine 11:438-444(1993).
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                                                                                                                                                                                                                                                                                                                                DB 1; Length 546;
                                                                                                                                                                                                                                                                                                                                                                      1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
                                                                                            FUSION GLYCOPROTEIN FO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Canine distemper virus (strain Onderstepoort) (CDV)
                                                                                                                                                 ARG/LYS-RICH (BASIC).
                                                                                                                                                                                                                                                                                                                                                     Pred. No. 0.83;
                                                                                                                                                                                                                                                                                                                                                                    0; Mismatches
                                                                                                             F2 PROTEIN.
F1 PROTEIN.
                                                                                                                                                                    POTENTIAL.
                                                                                                                                                                                                                                                                                                                                  Score 66;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  canine distemper virus antigens.";
                                                                                                    26.6%;
93.3%;
                                                                                                                                                                                                                                                                                                                                                                                                                             111411111111 1
284 LSEIKGVIVHRLESV 298
                                                                                                                                                                                                                                                                                                                                                                                                        19 LSEIKGVIVHRLEGV 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  other paramyxoviruses.";
Virus Res. 8:373-386(1987).
                                                                                                                                                                                                                                                                                                                                                                    14; Conservative
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CHAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Ор
                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; &cvc...
HSSP; P04449; LSVF.
InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
Pram; PF00523; Fusion_protein; Transmembrane; Envelope protein; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                         SUBUNIT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2
                                                                                            LINKED BY A DISULFIDE BOND.
-1- SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE-95088609; PubMed-7996154;
Evans S.A., Baron M.D., Chamberlain R.W., Goatley L., Barrett T.;
"Nucleotide sequence comparisons of the fusion protein gene from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CYTOPLASMIC (POTENTIAL).
LINKAGE BETWEEN F2 & F1 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
7AA4FICA82169093 CRC64;
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16-OCT-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein precursor [Contains: Fusion glycoprotein F2;
Fusion glycoprotein F1].
                                  -!- FUNCTION: THIS PROTEIN DIRECTS FUSION OF VIRAL AND CELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ô
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 72; DB 1; Length 550;
Pred. No. 0.14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Rinderpest virus (strain RBOK) (RDV).
Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0; Indels
                  Submitted (OCT-1995) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     29.0%; Sco.
100.0%; Pred. No. v.
0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROTEIN F2.
PROTEIN F1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             POTENTIAL.
                                                                                                                                                                                                                                                                                                                         EMBL; M14915; AAA46423.1; -... EMBL; X05597; CAA29090.1; ALT_INIT. EMBL; K01711; AAA75499.1; ALT_INIT. EMBL; U03659; AAA56649.1; ALT_INIT. EMBL; U03659; AAA56649.1; ALT_INIT. EMBL; U03670; AAA56660.1; ALT_INIT. EMBL; U08416; AAA5660.1; ALT_INIT. EMBL; Z66517; CAA91369.1; ALT_INIT. EMBL; Z66517; CAA91369.1; ALT_INIT. EMBL; Z66517; CAA91369.1; -... INIT. EMBL; Z66517; CAA91369.1; 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-FEB-1995 (Rel. 31, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61
67
59532 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19 LSEIKGVIVHRLEGV 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match 29.0
Best Local Similarity 100.
Matches 15; Conservative
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112
112
136
136
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61
67
550 AA;
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                                                         MEMBRANES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      VGLF_RINDR
P41356;
                                                                                                                                   FAMILY
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CHAIN
CHAIN
TRANSMEM
DOMAIN
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VGLF_RINDR
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                                                                                                                                                                                                                                                                                                         EMBL; Z30700; CAA83186.1; -.
EMBL; Z30697; CAA83181.1; -.
PIR; S47305; S47305.
HSSP; P04849; ISVF.
InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
Glycoprotein; Fusion protein; Transmembrane; Envelope protein; Signal.
SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   15-JUL-1998 (Rel. 36, Last Sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Gonadoliberin I precursor (Gonadotropin-releasing hormone I) (GnRH-I)
(LH-RH I) (Luliberin I).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pagrus major (Red sea bream) (Chrysophrys major).
Bukaryota, Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Actinopterygii; Neopterygii; Teleostei; Buteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidei;
                                                                     -:- SUBBUNTT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2 LINKED BY A DISULFIDE BOND.
-:- SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Okuzawa K., Granneman J., Bogerd J., Goos H., Zohar Y., Kagawa H.;
Submitted (SEP-1996) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ARG/LYS-RICH (BASIC).
LINKAGE BETWEEN F2 & F1 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
ED3DF8AFFDBECB95 CRC64;
                 J. Gen. Virol. 75:3611-3617(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 71; DB 1; Length 546; Pred. No. 0.19;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Indels
and attenuated strains of rinderpest virus.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FUSION GLYCOPROTEIN FO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ARG/LYS-RICH (BASIC)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY: Belongs to the GNRH family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F2 PROTEIN F1 PROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         POTENTIAL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     15-JUL-1998 (Rel. 36, Created)
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93.38;
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58705 1
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109
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NCBL_TaxID=143350;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SIMILARITY)
                                                         MEMBRANES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TISSUE-Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GON1_PAGMA
P70074;
                                                                                                                                 FAMILY
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TRANSMEM
TRANSMEM
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CARBOHYD
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CARBOHYD
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Fusion glycoprotein F1].
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                                            Measles
                                                        /irus),
                                                                              virus),
                                    /irus),
                                                                                                                                            /irus)
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                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
Glycoprotein; Fusion protein; Transmembrane; Envelope protein; Signal.
SIGNAL
                                                                                                                                                                                Mori T., Sasaki K., Hashimoto H., Makino S.;
"Molecular cloning and complete nucleotide sequence of genomic RNA of the AIK-C strain of attenuated measles virus.";
Virus Genes 7:67-81(1993).
-!- FUNCTION: THIS PROTEIN DIRECTS FUSION OF VIRAL AND CELLULAR MEMBRANES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                        SUBUNIT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2 LINKED BY A DISULFIDE BOND.
SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       LINKAGE BETWEEN F2 & F1 (POTENTIAL).
N-LINKED (GLCNAC. . . ) (POTENTIAL).
N-LINKED (GLCNAC. . . ) (POTENTIAL).
N-LINKED (GLCNAC. . . ) (POTENTIAL).
                               01-JUN-1994 (Rel. 29, Created)
01-JUN-1994 (Rel. 29, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein precursor [Contains: Fusion glycoprotein F2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-AUG-1988 (Rel. 08, Created)
01-AUG-1988 (Rel. 08, Last sequence update)
16-CCT-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein precursor [Contains: Fusion glycoprotein F2;
                                                                                               Measles virus (strain AIK-C) (Subacute sclerose panencephalitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     DB 1; Length 550; 0.14;
                                                                                                                    Viruses; ssRNA negative-strand viruses; Mononegavirales; Paramyxoviridae; Paramyxovirinae; Morbillivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAC4DAB92DE0D938 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  POTENTIAL.
CYTOPLASMIC (POTENTIAL).
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             550 AA.
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Mismatches
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             PRT;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 59540 MW;
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           STANDARD;
                                                                           Fusion glycoprotein F1].
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67
550 AA;
                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
                                                                                                                              Paramyxoviridae; NCBI_TaxID=36408;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         15;
             JGLF MEASA
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                                                                                                             virus)
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VGLF_MEASA
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Matches
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Measles virus (strain Leningrad-16) (Subacute sclerose panencephalitis
                                                                                                                                                                                                                                                                                                                                                                                                                       Measlés virus (strain Edmonston-Zagreb) (Subacute sclerose panencephalitis virus), Measles virus (strain Philadelphia-26) (Subacute sclerose panencephalitis virus), and Measles virus (strain Edmonston B) (Subacute sclerose panencephalitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=Bomonston:
MEDLINE=90085790; PubMed=2596022;
Metaneo R., Schmid A., Spielhofer P., Kaelin K., Baczko K.,
Meulen V., Pardowitz J., Flanagan S., Rima B.K., Udem S.A.;
"Mutated and hypermutated genes of persistent measles viruses which
virology 173:415-425(1989).
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"The nucleotide sequence of the mRNA encoding the fusion protein of measles virus (Edmonston strain): a comparison of fusion proteins from several different paramyxoviruses.";
Measles virus (strain Edmonston) (Subacute sclerose panencephalitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rota J.S., Wang Z.D., Rota P.A., Bellini W.J.; "Comparison of sequences of the H, F, and N coding genes of measles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Subacute sclerosing panencephalitis is typically characterized by alterations in the fusion protein cytoplasmic domain of the persisting measles virus";
Virology 188:910-915(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Buckland R., Gerald C., Barker R., Wild T.F.; "Fusion allycoperation of measles virus: nucleotide sequence of the gene and comparison with other paramyxoviruses."; Gen. Virol. 68:1691-1703(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Schmid A., Spielhofer P., Cattaneo R., Baczko K., Ter Meulen V., Billeter M.A.;
                                                                                                                                       virus (strain Halle) (Subacute sclerose panencephalitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11235, 11236, 70147, 70149, 70148, 70146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN-Edmonston, Leningrad-16, and Edmonston-Zagreb;
MEDLINE-94249283; PubMed-8191786;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN=Edmonston;
MEDLINE=87071668; PubMed=3788062;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE-87224816; PubMed-3585281;
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MEDLINE=92263801; PubMed=1585658;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            virus vaccine strains.";
Virus Res. 31:317-330(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              202:665-672(1994).
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LSEIKGVIVHRLEGV
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SEQUENCE
             19
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DOMAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
Glycoprotein; fusion protein; Transmembrane; Envelope protein; Signal.
SIGNAL
                                                                 Gaps
                                                                                                                                                                                                                                             Measles virus (strain Yamagata-1) (Subacute sclerose panencephalitis
                                                                                                                                                                                                                                                                                                                                                                                                      -!- SUBDINIT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2 LINKED BY A DISULFIDE BOND.
-!- SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN
            AMIDATION (G-36 PROVIDE AMIDE GROUP). 49313FD6FD6B87DA CRC64;
                                                                                                                                                                                                                                                                                                         MEDLINE-90385702; PubMed=1698327; MEDLINE-90385702; PubMed=1698327; Molecular analysis of structural protein genes of the Yamagata-1 strain of defective subacute sclerosing panencephalitis virus. IV. Nucleotide sequence of the fusion gene."; Virus Genes 4:173-181(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CYTOPLASMIC (POTENTIAL).
LINKAGE BETWEEN F2 & F1 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
                                                                                                                                                                              01-MAY-1992 (Rel. 22, Created)
01-MAY-1992 (Rel. 22, Last sequence update)
16-007-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein Precursor [Contains: Fusion glycoprotein F2;
                                                                .;
;
                                          Score 72.5; DB 1; Length 95;
Pred. No. 0.019;
3; Mismatches 15; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 72; DB 1; Length 534;
Pred. No. 0.14;
0; Mismatches 0; Indels
   PYRROLIDONE CARBOXYLIC ACID
                                                                                                                                                                                                                                                                 Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11239;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EXTRACELLULAR (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -LINKED (GLCNAC. . .) (PORTION PRINTED (GLCNAC. . .)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FUSION GLYCOPROTEIN FO
                                                                                                27 HWSYGLSPGGK-RDLDSLSDTLGNIERFPHVDSP 60
                                                                                    2 HWSYGLRPGSSGPSLKLLSEIKGVIVHRLEGVEGP 36
                                                                                                                                                             534 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROTEIN F1.
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Conservative 0;
26
35
10753 MW;
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                                           29.28;
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                                Ouery Match
Best Local Similarity 45...
Local Similarity 45...
Local Similarity 45...
                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 534
136
534
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Best Local Similarity
Matches 15; Conserv
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 26
35
95 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                          FAMILY.
                                                                                                                                                            VGLF_MEASY P26032;
 MOD_RES
MOD_RES
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CHAIN
TRANSMEM
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TRANSMEM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                          virus).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHAIN
                                                                                                                                                  VGLF_MEASY
  FFS
                                                                                                        Db
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PIR; S47300; S47300.
HSSP; P04849; 1SVF.
InterPro; ISPO0776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
Glycoprotein; Fusion protein; Transmembrane; Envelope protein; Signal.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   -!- SUBUNIT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2 LINKED BY A DISULFIDE BOND.
-!- SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. MEDLINE=95088609; PubMed=7996154; Evans S.A., Barron M.D., Chamberlain R.W., Goatley L., Barrett T.; "Nucleotide sequence comparisons of the fusion protein gene from "Nucleotide sequence..."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ARG/LYS-RICH (BASIC).
LINKAGE BETWEEN F2 & F1 (POTENTIAL).
                                                                                                                                                                                               01-FEB-1995 (Rel. 31, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein precursor [Contains: Fusion glycoprotein F2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 virulent and attenuated strains of rinderpest virus.";
J. Gen. Virol. 75:3611-3617(1994).
-!- FUNCTION: THIS PROTEIN DIRECTS FUSION OF VIRAL AND CELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-LINKED (GLCNAC. . .) (POTENTIAL)
N-LINKED (GLCNAC. . .) (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
O-LINKED (POTENTIAL).
38B539B89344F401 CRC64;
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Pred. No. 0.14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        0; Indels
                                                                                                                                                                                                                                                                                                                                                             Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBI_TaxID=39007;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FUSION GLYCOPROTEIN FO. F2 PROTEIN. F1 PROTEIN.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Mismatches
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                                                                                                                                                                                                                                                                                                                                             Rinderpest virus (strain RBT1) (RDV).
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100.0%; Pre
0; }
                                                                                                                                                                                            01-FEB-1995 (Rel. 31, Created)
01-FEB-1995 (Rel. 31, Last seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      58418 MW;
288 LSEIKGVIVHRLEGV 302
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                                                                                                                                              STANDARD;
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546 AA;
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es 15; Conserv
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P41360;
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RESULT

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Gaps

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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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OM protein - protein search, using sw model

September 24, 2003, 17:00:31; Search time 8.72299 Seconds Run on:

(without alignments) 253.383 Million cell updates/sec

US-09-848-834A-17

Perfect score:

248 1 XHWSYGLRPGSSGPSLKLLS......HRLEGVEGPSLHWSYGLRPX 47 Sequence:

BLOSUM62 Scoring table:

Gapop 10.0 , Gapext 0.5

Total number of hits satisfying chosen parameters:

127863 seqs, 47026705 residues

Searched:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%

Listing first 45 summaries Maximum Match 100%

SwissProt_41:* Database : Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

		Description	P51919 sparus aura		P41360 rinderpest		P08300 measles vir	P41356 rinderpest								measl	P51918 haplochromi		_		P45653 salmo trutt	Q9i8u0 thunnus obe	_	Q95335 tupaia glis	_	P49921 sus scrofa	073812 morone saxa	009163 mesocricetu	P07490 rattus norv	Q9ia10 dicentrarch			P35629 salmo salar		P80183 methanobact
SUMMAKIES		QI	GON1_SPAAU	VGLF_MEASY	VGLF_RINDB	VGLF_MEASA	VGLF_MEASE	VGLF_RINDR	GON1_PAGMA	VGLF_RINDL	VGLF_CDVO	VGLF_RINDK	VGLF_PHODV	GON1_MACMU	GON1_HUMAN	VGLF_MEASI	GON1_HAPBU	GON1_XENLA	GON1_SHEEP	GON3_ONCMY	GON3_SALTR	CX41_THUOB	TYO3_MOUSE	GON1_TUPGB	GON1_MOUSE	GON1_PIG	GON1_MORSA	GON1_MESAU	GON1_RAT	GON1_DICLA	TYO3_RAT	GON3_ONCTS	GON3_SALSA	MTRD_METTH	MTRD_METTM
		DB	Н	1	1	1	Н	-	-	7	Н	Н	Н	-	-	Н	Н	-	Н	Н	П	Н	Н	н	Н	~		Н	-	Н	Н	Н	Н	-	-
		Length	95	534	546	550	550	546	95	546	662	546	631	67	92	529	94	8	61	74	82	169	880	92	90	91	95	63	92	66	880	74	82	233	233
dф	Query		29.3	29.0	29.0	29.0	29.0	28.6	27.6	26.6	26.6	26.2	26.2	25.8	25.8	25.8	25.6	25.2	24.8	24.4	24.4	24.4			24.0					23.4				22.4	22.4
		Score	72.5	72	72	72	72	7	68.5	99	99	65	65	64	64	64	63.5	62.5	61.5	60.5	60.5	60.5	60.5		59.5	σ	59	28	28		\sim	ဖ	9	55.5	വ
	Result	No.	1	7	æ	4	J.	9	7	80	6	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27	28	29	30	31	32	33

		018480 manduca sex P07923 infectious P23309 bacillus st		
GON1_CHICK PURK_BACSU	PRA_MYCLE GON1_ALLMI STHA_SALTY	DLHD_MANSE VGLG_IHNV RS3_BACST	DOK1_HUMAN EAT2_HUMAN PPCT_BOVIN	YRV2_CAEEL
п п				7
92	249 10 466	497 508 217	481 132 213	520
22.2	22.0 21.8 21.8	21.4 21.4 21.2	21.2 21.0 21.0	21.0
55	54.5 54 54	53 53 52.5	52.5 52 52	52
34 35	36 37 38	39 40 41	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	45

ALIGNMENTS

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DEPLY, C. TPR002012; GUND.

Pfam; PF00446; GnRH; 1.

PROSTTE; PS00473; GNRH; 1.

Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus; Signal; Multigene family; Pyrrolidone carboxylic acid.

SIGNAL 1 25 PROGONADOLIBERIN I.

CHAIN 26 95 PROGONADOLIBERIN I.

PEPTIDE 26 35 GONADOLIBERIN I.

PETIDE 26 35 GONADOLIBERIN I.
                                                       01-0cT-1996 (Rel. 34, Created)
01-0cT-1996 (Rel. 34, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Gonadoliberin I precursor (Gonadotropin-releasing hormone I) (GnRH-I)
(LH-RH I) (Luliberin I) (SBGnRH).
                                                                                                                                                                       Eŭkaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidei;
                                                                                                                                                                                                                                                                                                                                                                                                                                      TISSUE-Brain;

PEDLINE-95268499; PubMed=7749463;

Gothilf Y., Elizur A., Chow M., Chen T.T., Zohar Y.;

"Molecular cloning and characterization of a novel gonadotropin-
releasing hormone from the gilthead seabream (Sparus aurata).";

Mol. Mar. Biol. Blotechnol. 4:27-35(1995).
                              95 AA.
                                                                                                                                                          Sparus aurata (Gilthead sea bream).
                              PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=95083645; PubMed=7991588;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; U30320; AAA75469.1; -. InterPro; IPR002012; GnRH.
                                STANDARD;
                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 26-35.
TISSUE=Brain;
                                                                                                                                                                                                                         Sparus.
                                                                                                                                                                                                                                    NCBI_TaxID=8175;
                                               P51919;
01-OCT-1996 (
01-OCT-1996 (
                                GON1_SPAAU
                                                                                                                                                                                                                       Sparidae;
RESULT 1
GON1_SPAAU
                                                                                                                                           GNRH1.
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CC B-cell group derived from the cell-associated PA; and (2) at least 1
CC first T helper cell group which is foreign to the animal. Analogues of
CC human PSW, human Her2 and human/murine FGFBb comprising a substantial
CC part of all known and predicted CTL and B-cell epitopes of the respective
CC PA and including at least one foreign T helper epitope are also claimed.
CC The method is used to treat prostate, prostate/preast or breast cancer.
CC The method is used to treat prostate, prostate/preast or breast cancer.
CC When the PA is human PSW, FGFBb and Her2, respectively.
CC (AAY92619), which appears on pages 184-187 of the specification.
XX
S Sequence 750 AA;

Ouery Match
Best Local Similarity 78.1%; Pred. No. 4.1e-07;
Matches 25; Conservative 0; Mismatches 4; Indels 3; Gaps 1;

Qy 9 PGSS--GPSLFNNFTVSFWLRVPKVSASHLE 280

Search completed: September 24, 2003, 17:40:08
JOB time : 56.5097 secs
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pronounced and for patients suffering from acute and chronic heart
                      failure.
                                                                                                                                                                                                                                                                                                                  8 X C C
                                                                                                                                                                    ò
                                                                                                                                                                                                    QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            mative sequence is replaced by a T-cell epitope such as P30, with mainfinal disturbance of the authentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 activity can increase muscle mass by up to at least 45% in cattle, pigs and poultry used for meat production, reducing the need for antibiotic feed-additives. Anti-GDFP waccines can be used to treat human diseases such as cancer cachexia where muscle atrophy is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The present sequence is that of AutoVac construct GDF-8 P30-3B, comprising the 109 C-terminal amino acid residues of human growth differentiation factor 8 (GDF-8) in which residues 84-104 are replaced by the promiscuous tetanus toxin T-cell epitope P30 (See AAB20144). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth rate of farm animals. The vaccines (see AAB20145-53) are capable of breaking autotolerance against autologous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the
                                                                                                                                                                                                  Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia; cardiant; human; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Growth differentiation factor 8 AutoVac construct GDF-8 P30-3B.
                                                                                                                                                                                                                                                                                                                                                  Location/Qualifiers
1.83
/note= "identical to residues 267-349 of human
GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "identical to residues 371-375 of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Misc-difference 90..91 /note= "optionally replaced by Glu-Gly"
                                                                                                                                                                                                                                                                                                                                                                                                                                           "tetanus toxoid P2 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Halkier T, Mouritsen S, Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 1; Page 104; 110pp; English.
                                                    AAB20151 standard; Protein; 109 AA.
                                                                                                                                                                                                                                                                          Chimeric - Homo sapiens.
Chimeric - Clostridium tetani.
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-JUL-2000; 2000WO-DK00413.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99DK-0001014.
                                                                                                                            30-APR-2001 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "t\
105..109
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                          84..104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2001-112680/12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200105820-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       20-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      26-JUL-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               25-JAN-2001
                                                                                        AAB20151;
                                                                                                                                                                                                                                                                                                                                                                     Region
                                                                                                                                                                                                                                                                                                                                                                                                                          Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                              Region
                 RESULT 14
AAB20151
                                                                                                                                                                                                                                                                                                                                                      Key
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dalum I;
                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mutant human prostate specific membrane antigen construct, hPSM6.3.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer
                                                                                                        6
                                                     22; Length 109;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Haaning J, Leach D,
                                                                                                        2; Indels
                                                                                                                                                                                         10 GSSGPSL-----FNNFTVSFWLRVPKVSASHLE 37
                                                  Score 119.5; DB 22
Pred. No. 4.2e-08;
1; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        210..230
/label= P30
/note= "foreign epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               448..462
/label= P2
/note= "foreign epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                      AAY92644 standard; Protein; 750 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gautam A, Birk P, Karlsson G;
                                                  43.68;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   98DK-0001261.
98US-0105011.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-AUG-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mouritsen S,
                                                  Query Match
Best Local Similarity 67.6
Matches 25; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-349917/30.
109 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO200020027-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Homo sapiens.
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-OCT-1998;
20-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           13-APR-2000
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                                                                                                                                                                                                                                                                                                                                                                                                               AAY92644;
  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptide
                                                                                                                                                                                                                                                                                                       RESULT 15
                                                                                                                                                                                                                                                                                                                                AAY92644
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Synthetic

Region

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Region Region

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ingrand (OpGU) and tetahus toxoid Paloen by Intiline Sieverprotegerin is a secreted member of the tumour necrosis factor receptor family, which blocks osteoclastogenesis in a dose dependent manner. The OpGU protein is synthesised as a type II transmembrane protein. The murine and human OpGL polypeptides are 87% homologous. OpGL is a potent osteoclast differentiation factor when combined with CSF-1. It is not capable of inducing osteoclast differentiation in the absence of CSF-1. OpGL is also an activator of mature osteoclasts. The specification describes a method for the in vivo down-regulation of OpGL polypeptide or subsequence, and/or at least one OpGL analogue to induce an immune response in the animal. The method and OpGL polypeptide are useful for treating, preventing and ameliorating osteoporosis or other diseases or conditions characterised by excessive bone resorption.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  present sequence represents fusion protein of murine osteoprotegerin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     In vivo down-regulation of osteoprotegerin ligand (OPGL) activity used to treat, prevent and ameliorate osteoporosis -
                                                                                                        An osteoprotegerin ligand/tetanus toxoid P30 epitope fusion protein.
                                                                                                                                                  Osteoprotegerin ligand; OPGL; osteoprotegerin; osteoclastogenesis;
                                                                                                                                                                       tumour necrosis factor receptor; type II transmembrane protein; osteoclast differentiation; CSF-1; osteoclast activator; immune response; osteoporosis; bone resorption.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "residues 262-316 of murine OPGL"
                                                                                                                                                                                                                                                                                                                                                                                                                                       "residues 158-255 of murine OPGL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /note= "tetanus toxoid P30 epitope"
134..188
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 120; DB 21;
Pred. No. 6.9e-08;
; Mismatches 3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            11 SSGPSLFNNFTVSFWLRVPKVSASHLEGPSLHWS 44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example; Page 94-95; 110pp; English.
                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                             /note= "His tag"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      5
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ilarity 73.5%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               98DK-0001164.
98US-0102896.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     99WO-DK00481.
                                                            25-JUL-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                              /note= "r
113..133
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Haaning J;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-271444/23.
N-PSDB; AAZ99970.
                                                                                                                                                                                                                                                             Synthetic.
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 188 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              40200015807-A1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-SEP-1998;
02-OCT-1998;
                                                                                                                                                                                                                                                                                                            Mus musculus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     13-SEP-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           23-MAR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Halkier T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local S
Matches 25
                    AAY84423;
                                                                                                                                                                                                                                                                                                                                                                                                                         Protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                                                                                                             Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Protein
Óλ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ä
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present sequence is that of AutoVac construct GDF-8 P30-2, comprising the 109 C-terminal amino acid residues of human growth differentiation factor 8 (GDF-8) in which residues 49-69 are replaced by the promiscuous tetanus toxin T-cell epitope P30 (see AAB20144). It is an object of the invention to produce a cecombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth rate of farm animals. The vaccines (see AB20145-53) are capable of breaking autotolerance against autologous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the minimal disturbance of the authentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 cotivity can increase muscle mass by up to at least 45% in cattle, pigs and poultry used for meat production, reducing the need for antibution where the contract contracts and production in the contract contracts and poultry used for meat production, reducing the need for antibution where the contract contracts and poultry used for meat production, reducing the need for antibution the contract contracts.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production \,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 treat human diseases such as cancer cachexia where muscle atrophy is pronounced and for patients suffering from acute and chronic heart
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                             /note= "Cys-73 may be substituted by Ser to avoid
    disulfide bond formation"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7;
                                                                                 /note= "identical to residues 267-314 of human
                                                                                                                                                                                                 of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 44.0%; Score 120.5; DB 22; Length 109;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 WSYGLRPG-----SSGPSLFNNFTVSFWLRVPKVSASHLE-GP 39
                                                                                                                                                                                                                                                                                                                               /note= "optionally replaced by Glu-Gly"
                                                                                                                                                                                            /note= "identical to residues 336-375
                                                                                                                                                'note= "tetanus toxoid P2 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred. No. 3.1e-08;
2; Mismatches 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Example 1; Page 101-102; 110pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Halkier T, Mouritsen S, Klysner S;
                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY84423 standard; Protein; 188 AA.
                                                                                                           GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-JUL-2000; 2000WO-DK00413.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           61.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99DK-0001014
99US-0145275
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                27; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                       70..109
                                                                                                                             49..69
                                                                                                                                                                                                                                                                                                       Misc-difference 90..91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2001-112680/12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Local Similarity
Matches 27; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         109 AA;
                                                                                                                                                                                                                                        Misc-difference
                                                                                                                                                                                                                                                                                                                                                                           WO200105820-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-JUL-1999;
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Gaps

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Length 188; Indels

Sequence Query Match

RESULT 13 AAY84423 ID AAY844

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05-OCT-1999;
                                                                                                                                                                20-OCT-1998;
                                                                       13-APR-2000
                                                                                                                                                                                                                                           Steinaa L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAB20149;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT 12
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οž
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This is an immunogenical model of analogue containing totating propers F2 and P30. Immunogenic analogues of WUC-1 and, e.g. human prostate active contained method as an eutovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms (see features table). It regions suitable for the insertion of foreign T helper epitopes were identified. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. hPSM, heregulin 2 (Her2) and/or fibroblast growth factor 80 (FFRB). The method comprises effecting simultaneous presentation by antigen producing cells (APCs) of the animals immune system of: (1) at least 1 CTL (cytotoxic cell group proteins) are paralogues of human PSM, human cell group which is foreign to the animal. Analogues of human PSM, human and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is the contract when the PA is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          human PSM, FGF8b and Herz, respectively.

Note: This sequence does not appear in the specification. It was made using the mucin repeat sequence (AAY92664), P2 and P30 (AAY92625-26), which appear on pages 220, 213 and 214 respectively, of the
                                                                                                                                                                                                                                     This is an immunogenized MUC-1 analogue containing foreign epitopes P2
                                                    Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mutant human prostate specific membrane antigen construct, hPSM1.1.
                                                                                                                                          Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 21; Length 216;
                                                    Haaning J, Leach D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      118 PGSTAPPAHGVTSAPDTRFNNFTVSFWLRVPKVSASHLE 156
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  9 PGSSGP-----SLFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
44.2%; Score 121; DB 21
Best Local Similarity 64.1%; Pred. No. 6e-08;
Matches 25; Conservative 2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note≃ "foreign epitope"
                                                    Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AAY92627 standard; Protein; 750 AA.
                                                                                                                                                                                                    Example 4; Page -; 220pp; English.
                                                  Mouritsen S, Niels
Birk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32..52
/label- P30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17..31
/label= P2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (first entry)
               (MEBI-) M & E BIOTECH AS.
                                                                                                          WPI; 2000-349917/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        216 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            10-AUG-2000
                                              Steinaa L,
                                                                     Gautam A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY92627;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Ношо
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 11
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antigen (PSM) constructs, which contain foreign epitopes (P2 and/or antigen (PSM) constructs, which contain foreign epitopes (P2 and/or as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteline residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), eregulin 2 (Herz) and/or fibroblast growth factor BV (FGRBD). The method comprises effecting simultaneous presentation by antigen producing cells (APCs) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-1ymphocyte) group derived from the PA and/or at least 1 E cell group derived from the cell-associated PA; and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Herz and human/murine FGRBb comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least prostate, prostate/breast or breast cancer the method is used to treat prostate, prostate/breast or breast cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY92627-49 are mutant immunogenized human prostate specific membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dalum I;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia; cardiant; human; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 when the PA is human PSM, FGF8b and Her2, respectively.
Note: This sequence was constructed from the wild type human PSM
(AAY92619), which appears on pages 184-187 of the specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Length 750;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Leach D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Haaning J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           44.2%; Score 121; DB 21;
95.8%; Pred. No. 2.6e-07;
ive 0; Mismatches 1;
/note= "foreign epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Nielsen KG,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16 LFNNFTVSFWLRVPKVSASHLEGP 39
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB20149 standard; Protein; 109 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Example 1; Page -; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gautam A, Birk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chimeric - Homo sapiens.
Chimeric - Clostridium tetani.
                                                                                                                                                                                                                                             99WO-DK00525
                                                                                                                                                                                                                                                                                                                                                            98US-0105011
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Best Local Similarity 95.8
Matches 23; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                              (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2000-349917/30
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                                                                                 WO200020027-A2.
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us-09-848-834a-18.rag

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Homo sapiens
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20-OCT-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 10
AAY92665
              QQ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ò
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       treat human diseases such as cancer cachexia where muscle atrophy is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                           The present sequence is that of AutoVac construct GDF-8 P30-3A, comprising the 109 C-terminal amino acid residues of human growth differentiation factor 8 (GDF-8) in which residues 79-99 are replaced by the promiscuous tetanus toxin T-cell epitope P30 (see AAB20144). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth rate of farm animals. The vaccines (see AAB20145-53) are capable of breaking autotolerance against autologous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    native sequence is replaced by a T-cell epitope such as P30, with mainfand disturbance of the authentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used for genetic immunisation of the animals. Down-regulation of GDF-8 activity can increase muscle mass by up to at least 45% in cattle, paiss and poultry used for meat production, reducing the need for antibiotic feed-additives. Anti-GDF8 vaccines can be used to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Mutant human prostate specific membrane antigen construct, hPSM1.10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             pronounced and for patients suffering from acute and chronic heart
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ch 44.9%; Score 123; DB 22; Length 109; 1 Similarity 78.1%; Pred. No. 1.4e-08; 25; Conservative 2; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Leach D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Haaning J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10 GSSG----PSLFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     673..693
/label= P30
/note= "foreign epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /label= P2
/note= "foreign epitope"
                                          Example 1; Page 102-103; 110pp; English.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAY92633 standard; Protein; 750 AA
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Gautam A, Birk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99WO-DK00525.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           109 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO200020027-A2.
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20-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                10-AUG-2000
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic
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Best Local 9
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                                                                                                                                                                                                                                                                                                                                                                as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated for self-proteins, e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor BB (FGFBB). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the PA and/or at least 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            human PSM, human Her2 and human/murine FGF8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed.
                                                                                                                                                                                                                                                             AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     first T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and human/murine FGF8b comprising a substantial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Her2, respectively.

Note: This sequence was constructed from the wild type human PSM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                       Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mucin repeat; MUC-1 analogue; vaccination; self-protein; cancer; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (AAY92619), which appears on pages 184-187 of the specification
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 121.5; DB 21; Length 750;
Pred. No. 2.2e-07;
0; Mismatches 3; Indels 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MUC-1 analogue containing foreign epitopes.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       673 FNNFTVSFWLRVPKVSASHLE-PSSHNKY 700
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                17 FNNFTVSFWLRVPKVSASHLEGPSLHWSY 45
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61..75
/label= P2
136..156
/label= P30
/note= "q"
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                                                                                                                                                                                      Example 1; Page -; 220pp; English
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86.28;
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Best Local Similarity 86.2'
Matches 25; Conservative
WPI; 2000-349917/30.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      750 AA;
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immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic immunogen of the invention.
as luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic
                                                                                                                                                                                                Local Similarity 54.7 les 29; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mouritsen S,
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         73
                                                                                                                                                        51 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WO200105820-A2
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                                                                                                                                                                                                                                                                                                                                                                 AAB20150;
                                                                                                                                                                                   Query Match
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                                                       5;
                                                                                                                                                                                                                                                                                          Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                       Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to a synthetic immunogen for inducing specific antibodies against gonadotropin releasing hormone (GnRH also known
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Other" Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide
                                                                                                 HWSYGLRPGSSGPSLFNNFTVSFWLRVPKVSASHL---EGPSLHWSYGLRP 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Gonadotrophin releasing hormone epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Gonadotrophin releasing hormone epitope
                                                       .;
6
                            DB 23; Length 47;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Malaria CSP protein (378-398 aa)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "Amidated glycine or glycinamide"
                           51.6%; Score 141.5; DB 2
58.8%; Pred. No. 1.9e-11;
iive 1; Mismatches 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 11; Page 12-13; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
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                                                                                                                                                                                  AA.
                                                                                                                                                                                                                                                                                                                                                                           Chimeric - Plasmodium falciparum.
Chimeric - Mammalia.
                                                                                                                                                                                  21
                                                                                                                                                                                                                                                                  Synthetic immunogen peptide 12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                              'label= OTHER
                                                                                                                                                                                AAU11431 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       aa)"
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                                                                                                                                                                                                                                      (first entry)
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                                                       Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     43..51
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                                        Similarity
  Æ,
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             epitope or its
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                              he
Local S.
30;
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                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic
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                                                                                 7
                                                                                                                                                                                                            AAU11431;
 Sequence
                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Peptide
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                                                    Matches
                                                                                                                                                                   AAU11431
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3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production \,
                        Gaps
                                            49
                                                                  50
                                                                                                                                                                                                                                                                                                                                                                                                                     to avoid
                                                                                                                                                                                                                Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia; cardiant; human; mutant; mutein.
                                                          Growth differentiation factor 8 AutoVac construct GDF-8 P30-3A.
                        6
                                              2 HWSYGLRPGSSGPSLFNNFTVSFWLRVPKVSA----SHLEGPSLHWSYGLRP
                                                                                                                                                                                                                                                                                                                            /note= "identical to residues 267-345 of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                      human
  Length 51;
                                                                                                                                                                                                                                                                                                                                                              /note= "tetanus toxoid P2 epitope"
100..109
/note= "identical to residues 366-375 of
                        11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                      Ser
                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "optionally replaced by Glu-Gly"
                                                                                                                                                                                                                                                                                                                                                                                                                      substituted by
Score 138.5; DB 23;
Pred. No. 5.1e-11;
4; Mismatches 11;
                                                                                                                                                                                                                                                                                                                                                                                                                     "Cys-73 may be substituted disulfide bond formation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Klysner S;
                                                                                                                                                                                                                                                                                                       Location/Qualifiers
                                                                                                                         AAB20150 standard; Protein; 109 AA
                                                                                                                                                                                                                                                                                                                                                                                                GDF-8"
                                                                                                                                                                                                                                                            Chimeric - Homo sapiens.
Chimeric - Clostridium tetani.
Synthetic.
  50.5%;
54.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-JUL-2000; 2000WO-DK00413.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99DK-0001014
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          99US-0145275
                                                                                                                                                                      (first entry)
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A.

AAU11428 standard; peptide; 47

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RESULT 6
AAU11428
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to a synthetic immunogen for inducing specific antibodies against gonadctropin releasing hormone (GnRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other synaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody tirres. The present sequence is a synthetic immunogen of the invention.
luteinising hormone releasing hormone; LHRH; contraceptive; promiscuous helper T-cell peptide epitope; immunominic peptide epitope; breast cancer; uterine cancer; gynaecological cancer; endometriosis; uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                    "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          gonadotropin releasing hormone, comprises fusion peptide having
promiscuous helper T-cell peptide epitope and immunomimic peptide
                                                                                                                                                                                                                                                                                                                                                                                                       ..10
note= "Gonadotrophin releasing hormone epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 'note= "Gonadotrophin releasing hormone epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel synthetic immunogen for inducing immune response against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /note= "Amidated glycine or glycinamide'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              17.31
/note= "Tetanus toxoid (830-844 aa)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 145; DB 23;
Pred. No. 6.2e-12;
5; Mismatches 9;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     note= "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'note= "Spacer peptide"
                                                                                                                                                                                                                                                                             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 11; Page 12; 43pp; English.
                                                                                                                                                      Chimeric - Clostridium tetani.
Chimeric - Mammalia.
                                                                                                                                                                                                                                                                                                                                        label - OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   52.9%;
60.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                         (1..10 aa)"
11..16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           04-MAY-2001; 2001WO-US14363
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   05-MAY-2000; 2000US-202328P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2-10 aa)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         epitope or its analogue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ..46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Grimes S, Michaeli D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (APHT-) APHTON CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WPI; 2002-049440/06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           46 AA;
                                                                                                                                                                                                                                                                                                         Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200185763-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Modified-site
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               15-NOV-2001
                                                                                                                                                                                                                    Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                    Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Peptide
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antibodies against gonaddropin releasing hormone (GRRH also Known as lutein. Single hormone releasing hormone. LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GNRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hippertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GRRH antibody titres. The present sequence is a synthetic immunogen of the invention.
                                                                                                        luteinising hormone releasing hormone; LHRH; contraceptive; promiscuous helper T-cell peptide epitope; immunomimit peptide epitope; breast cancer; uterine cancer; gynaecological cancer; endometriosis; uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 The invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                                                                           "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                      39.47
/note= "Gonadotrophin releasing hormone epitope
                                                                                                                                                                                                                                                                                                                          "Gonadotrophin releasing hormone epitope
                                                                                         Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /note= "Amidated glycine or glycinamide"
                                                                                                                                                                                                                                                                                                                                                                                                        "Malaria CSP protein (288-302
                                                                                                                                                                                                                                                                                                                                                                                                                                      "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                         "Spacer peptide"
                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Claim 11; Page 11; 43pp; English.
                                                                                                                                                                                   Chimeric - Plasmodium falciparum
Chimeric - Mammalia.
                                                             Synthetic immunogen peptide 9.
                                                                                                                                                                                                                                                                              /label= OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-MAY-2000; 2000US-202328P.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-MAY-2001; 2001WO-US14363.
                                                                                                                                                                                                                                                                                                                                            (1..10 aa)"
11..16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (2-10 aa)"
47
                              (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     epitope or its analogue
                                                                                                                                                                                                                                                                                                                                                                                          17..34
/note=
                                                                                                                                                                                                                                                                                                                             /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Grimes S, Michaeli D,
                                                                                                                                                                                                                                                                                                /note=
                                                                                                                                                                                                                                                                                                                                                                           'note=
                                                                                                                                                                                                                                                                                                                                                                                                                                         /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 2002-049440/06.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (APHT-) APHTON CORP.
                                                                                                                                                                                                                                                               Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 40200185763-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Modified-site
                              L2-MAR-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                15-NOV-2001
                                                                                                                                                                                                                     Synthetic.
AAU11428;
                                                                                                                                                                                                                                                                                                                                                                                                                       Peptide
                                                                                                                                                                                                                                                                                                                                                           Peptide
                                                                                                                                                                                                                                                                                                                                                                                          Peptide
                                                                                                                                                                                                                                                                                                               Peptide
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Gaps

9; Indels

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Conservative

Similarity 29; Conserv

Local

Matches

4

αq à

2 HWSYGLRPGSSGPSLFNNFTVSFWLRVPKVSASHLEGPSLHWSYGLRP 49

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Synthetic immunogenic peptides are provided in which a universal immune stimulator is linked to a peptide or protein hapten containing B cell and/or cytocoxic T lymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of a heterogeneous population expressing diverse HIA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Yersinia. Spacer amino acid sequences (e.g. Gly-Gly) can be provided between the invasin and Th domains and between the immune stimulator and hapten components. When the hapten is LHSH, then optionally the invasin domain can be omitted from the immune stimulator component.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       treating e.g. prostatic hyperplasia, androgen-dependent carcinoma, prostatic carcinoma, testicular carcinoma, endometriosis, benign uterine tumours, recurrent functional ovarian cysts, (severe) premenstrual syndrome or oestrogen-dependent breast cancer, or for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The present sequence represents an LHRH-containing, invasin-free immunogenic peptide as above which can be used as a potent vaccir
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Immunogenic luteinising hormone releasing hormone peptide(s)
                                                                                 "tetanus toxin helper T cell epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 32;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 that suppress LHRH activity in males and females
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 152; DB 15;
Pred. No. 4.7e-13;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3 FNNFTVSFWLRVPKVSASHLE----HWSYGLRP 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (Updated on 25-MAR-2003 to correct PN field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        17 FNNFTVSFWLRVPKVSASHLEGPSLHWSYGLRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Mismatches
                                                                                                                    "LHRH hapten"
                                           Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 8; Page 84; 213pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAU11430 standard; peptide; 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic immunogen peptide 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           55.5%;
87.9%;
                                                                                                                                                                                                                                               94WO-US04832.
                                                                                                                                                                                                                                                                                     93US-0057166
94US-0229275
                                                                                                                                                                                                                                                                                                                                                                                                                               Ladd AE, Wang CY, Zamb T;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             12-MAR-2002 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           infertility
                                                                               /note=
23..32
/note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1994-357910/44
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 29; Conserv
                                                                                                                                                                                                                                                                                                                                               (LADD/) LADD A E. (WANG/) WANG C Y. (ZAMB/) ZAMB T.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32 AA;
                                                                                                                                                                                                                                             8-APR-1994;
                                                                                                                                                                                                                                                                                                        14-APR-1994;
                                                                                                                                                                                                                                                                                     27-APR-1993;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           induction of
                                                                                                                                                                409425060-A1
                                                                                                                                                                                                      10-NOV-1994.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Seguence
  Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAU11430;
                                                            Domain
                                                                                                      Domain
                                           Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 5
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              The invention relates to a synthetic immunogen for inducing specific antibodies against gonaddiropin releasing hormone (GRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunomimic peptide epitope or its analogue. The synthetic analogue, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other synaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GRHH antibody titres. The present sequence is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Helper T cell epitope; universal immune stimulator; invasin; hapten; vaccine; LHRH; luteinising hormone releasing hormone; prostate; androgen-dependent carcinoma; antitumour; infertility; tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide
                                                                                                                                                            "Gonadotrophin releasing hormone epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
                                                                             "Tetanus toxoid sequence (947-967 aa)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 34;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                    /note= "Amidated glycine or glycinamide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  67.5%; Score 185; DB 23;
100.0%; Pred. No. 2.1e-17;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    17 FUNFTVSFWLRVPKVSASHLEGPSLHWSYGLRP 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1 FNNFTVSFWLRVPKVSASHLEGPSLHWSYGLRP 33
                                                                                                                    "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LHRH-containing immunogenic peptide.
                                       Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR62702 standard; peptide; 32 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 11; Page 7; 43pp; English.
                                                                                                                                                                                                                                                                                                                         04-MAY-2001; 2001WO-US14363.
                                                                                                                                                                                                                                                                                                                                                                  05-MAY-2000; 2000US-202328P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (updated)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 100.v
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       epitope or its analogue
                                                                                                                    /note=
26..34
/note=
34
                                                                                                                                                                                                                                                                                                                                                                                                                                             Grimes S, Michaeli D,
                                                                               /note-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2002-049440/06.
                                                                                                                                                                                                                                                                                                                                                                                                          (APHT-) APHTON CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               34 AA;
                                                                                                                                                                                                                                         WO200185763-A2
                                                                                                                                                                                 Modified-site
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10-SEP-1995
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Synthetic
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                                                        Peptide
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Gaps

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RESULT 4 **AAR62702**

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Misc-difference 1
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                                                                                                                                    15-NOV-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence
                                Peptide
                                                        Peptide
                                                                              Peptide
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                                                                                                                                                                                                                                                                                                                                                peptide which comprises a promise course helper T-cell peptide epitope and immunomninic peptide epitope or its analogue. The synthetic immunomninic peptide epitope or its analogue. The synthetic immunomninic manner as against GRRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other typaraccological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GRRH antibody tires. The present sequence is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gonadotrophin releasing hormone, GnRH; synthetic immunogen, luteinising hormone releasing hormone; LHRH; contraceptive; promiscuous helper T-cell peptide epitope; immunomimic peptide epitope; breast cancer; uterine cancer; gynaecological cancer; endometriosis; uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                               The invention relates to a synthetic immunogen for inducing specific antibodies against gonadotropin releasing hormone (GnRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                                                                                               gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide
         42.50
/note= "Gonadotrophin releasing hormone epitope
                                                                                                                                                                                                                                      synthetic immunogen for inducing immune response against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 HWSYGLRPGSSGPSLFNNFTVSFWLRVPKVSASHLEGPSLHWSYGLRP 49
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Length 50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 HWSYGLRPGSSGPSLFNNFTVSFWLRVPKVSASHLEGPSLHWSYGLRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                      /note= "Amidated glycine or glycinamide'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ;;
0
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Pred. No. 8.6e-29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Mismatches
/note= "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Location/Qualifiers
                                                                                                                                                                                            Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           99.3%; Sc.
100.0%; Pred
0; F
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                                                                                                                                                                                                                                                                                            Claim 11; Page 11; 43pp; English.
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ف
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Chimeric - Mammalia.
Synthetic.
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                                                                                                                         04-MAY-2001; 2001WO-US14363
                                                                                                                                              05-MAY-2000; 2000US-202328P
                            (2-10 aa)"
50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          48; Conservative
                                                                                                                                                                                                                                                                       epitope or its analogue
                                                                                                                                                                                         Grimes S, Michaeli D,
                                                                                                                                                                    (APHT-) APHTON CORP.
                                                                                                                                                                                                              WPI; 2002-049440/06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity
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                                                                            WO200185763-A2
                                           Modified-site
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
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           Peptide
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luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-call peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to a synthetic immunogen for inducing specific
                                   "Other- Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue
                                                                                           /note= "Gonadotrophin releasing hormone epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ö
                                                                                                                                                                                                                                "Tetanus toxoid sequence (947-967 aa)"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      72.6%; Score 199; DB 23;
100.0%; Pred. No. 3.1e-19;
iive 0; Mismatches 0;
                                                                                                                                                                 "Spacer peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Stevens VC;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 11; Page 9; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAU11421 standard; peptide; 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic immunogen peptide 2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Chimeric - Clostridium tetani.
Chimeric - Mammalia.
/label- OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                        04-MAY-2001; 2001WO-US14363.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-MAY-2000; 2000US-202328P.
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Best Local Similarity 100.
Matches 36; Conservative
                                                                                                                          11..16
/note=
17..37
/note=
                                      /note=
1..10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WPI; 2002-049440/06.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (APHT-) APHTON CORP
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us-09-848-834a-18.rag

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GenCore version 5.1.6

Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: September 24, 2003, 16:58:36; Search time 56.5097 Seconds

Title: US-09-848-834A-18

Perfect score: 1XHWSYGLRPGSSGPSLFNNF......VSASHLEGPSLHWSYGLRPX 50

Scoring table: BLOSUMG2

Gapop 10.0, Gapext 0.5

Searched: 1107863 seqs, 158726573 residues

Total number of hits satisfying chosen parameters: 1107863

Minimum DB seq length: 2000000000

Maximum DB seq length: 2000000000

Post-processing: Minimum Match 100%

Listing first 45 summaries
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A_Geneseq_19Jun03:*

| SIDSI_gcgdata/geneseq_geneseqp_embl_/AA1980.DAT:*
| SIDSI_gcgdata/geneseq_geneseqp_embl_/AA1981.DAT:*
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| SIDSI_gcgdata/geneseq_geneseqp_embl_AA1992.DAT:*
| SIDSI_gcgdata/geneseq_geneseqp_embl_AA1993.DAT:*
| SIDSI_gcgdata/geneseq_geneseqp_

RESULT 1 AAU11429

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

		n DB ID Description				\$ 23 AAU11421 Synthetic immunoge				1 23 AAU11431 Synthetic immunoge	22 AAB20150	
ФP	Query	Match Length DB ID		99.3	72.6 3	67.5 3	55.5	52.9	51.6 4	50.5	44.9 109	
		Score	1 1 1 1 1 1 1	272	199	185	152	145	141.5	138.5	123	
	Result	No.		7	7	m	4	5	9	7	œ	

MUC-1 analogue con Mutant human prost Growth differentia An osteoprotegerin Growth differentia An osteoprotegerin Growth differentia Mutant human prost Modified murine in PSMpep012 - P30 in Tr830-1, a TrP-alp Human TrP-alpha an Mutant human prost Mutant human prost Ture30-5, a TrP-alpha an Mutant human prost Ture30-5, a TrP-alpha an Mutant murine PSM Mutant murine PSM Mutant murine PSM Mutant murine prost Modified human int Growth differentia Mutant human prost PSMpep010 - P30 in Tetanus toxoid epi Growth differentia Mutant human prost Growth differentia Amyloid beta/tetan Modified murine in Modified human int Tr830-3, a TrR-alpha an Growth differentia Mutant human prost	
AAY92665 AAY92665 AAY92627 AAB20149 AAX92644 AAX92647 AAX92647 AAX92648 AAX92648 AAX92648 AAX92648 AAX92648 AAX92648 AAX92646 AAX92646 AAX92660 AAX92660 AAX92660 AAX92660 AAX92660 AAX92660 AAX92630 AAB40173 AAB40173 AAB40173 AAB45130 AAB45130 AAB45130 AAB45130 AAB45130 AAB45130 AAB45130 AAB45130 AAB45130 AAB45130 AAB45130 AAB45130 AAB45130 AAB45130 AAB45130 AAB45130 AAB45130	ALIGNMENTS
210 20 20 20 20 20 20 20 20 20 20 20 20 20	
110.05 5 44.0 1.19.5 5 4.3.0 1.19.5	



Last sequence update) Last annotation update)

Created) PRT;

550 AA.

288 LSEIKGVIVHRLEGV 302

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Ogura H.;

"Nuclectide sequences of the fusion protein gene of subacute
"Nuclectide sequences of the fusion protein gene of subacute
sclerosing panencephalitis viruses: deduced amino acid sequences
showed the cytoplasmic donain highly mutated --truncated, elongated or
predicted secondary structure changed.";
Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AFI79430; AFF02695.1;
HSSP; P04849; ISVF.
                                                                                                                                                                                                                      Ning X., Ayata M., Morimoto K., Ito N., Shingai M., Kimura M.,
                                                                                                                                                                                                                                                                                                                                                                                                              29.0%; Score 72; DB 12; Length 550; 100.0%; Pred. No. 1.1; 0; Mismatches 0; Indels
                                                                                                                            Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBI_TaxID=11234;
                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
SEQUENCE 550 AA; 59559 MW; 609EE024A7E59C54 CRC64;
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                                                      01-MAY-2000 (TrEMBLrel. 13, 01-MAY-2000 (TrEMBLrel. 13, 01-DEC-2001 (TrEMBLrel. 19,
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Best Local Similarity 100.(
                           PRELIMINARY;
                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                        STRAIN=Masusako;
                                                                                                  Fusion protein.
                                                                                                                   Measles virus.
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Q9QEX1;
RESULT 15
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                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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                                                                                                                                                                                                                                                          Waku Kouomou D., Wild T.F.;
"Adaptation of wild-type measles virus to tissue culture.";
J. Virol. 76:1505-1509(2002).
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1.1;
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11234;
                                                                                                                                                                                                                                                                                         J. Virol. 76:1505-1509(2002).

EMBL: AY099392: AAL29688.1; -.

InterPro: IPRO00776; Fusion_gly.

Pfam: PF00523; fusion_gly: 1.

SEQUENCE 550 AA; 59551 MW; 9A7A4BA99E4DA8E9 CRC64;
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01-WAR-2002 (TrEMBLrel. 20, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-MAY-1999 (TrEMBLrel. 10, Created)
01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-0CT-2001 (TrEMBLrel. 18, Last annotation update)
Fusion protein.
                                       550 AA
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                                         PRT;
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                                                                                                                                                                                                                                              MEDLINE=21635526; PubMed=11773423;
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EMBL; AB012949; BAA33877.1; -.
EMBL; AB012948; BAA33871.1; -.
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Matches 15; Conservative
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Les 15; Conservative
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SEQUENCE FROM N.A.
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                                                                                                               Fusion protein.
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                                      Q8V049
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Gaps

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550 AA

Created) PRT;

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288 LSEIKGVIVHRLEGV 302
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Mucheotide sequences of the fusion protein gene of subacute
Nucleotide sequences of the fusion protein gene of subacute
sclerosing panencephalitis viruses: deduced amino acid sequences
showed the cytoplasmic domain highly mutated --truncated, elongated or
predicted secondary structure changed.";
Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
EMBL, AR179438; ABC2703.1;
HSSP: PO4849; 1SVF.
InterPro; IPR000776; Eusion_gly.
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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Sheng J., Watanabe M., Ueda S.;
Sclection of a neurotropic variant of measles virus.";
Submitted (AUG-1995) to the EMBL/GenBank/DDBJ databases
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Pfam; PF00523; fusion_gly; 1.
SEQUENCE 550 AA; 59589 MW; 73E7BD457ABA39B7 CRC64;
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SEQUENCE 550 AA; 59333 MW; 086E51FED5582BBA CRC64;
                                                          01-MAY-1997 (TrEMBLrel. 03, Created)
01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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Matches 15, Conservative
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STRAIN-Nagahata(HB);
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11234;
                                                                        Viruses; ssRNA negative-strand viruses; Mononegavirales; Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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Pfam; PF00523; fusion_gly; 1.
SEQUENCE 550 AA; 59564 MW; A78EEC9CD6268E58 CRC64;
                                                                                                                                                               MEDIINE=99329215; PubMed=10400788;
Johnston I.C., Ter Meulen V., Schneider-Schaulies J.,
Schneider-Schaulies S.;
Last sequence update)
Last annotation update)
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01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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Best Local Similarity 100.(
Matches 15; Conservative
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Best Local Similarity 100.
Matches 15; Conservative
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PRELIMINARY;
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                  Ayanot P.K., Sminev A.G., Bezborodova S.V., Starov S.K., Drygin V.V., Gusev A.A.;
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Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; D63926; BAA09958.1; -.
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Sheng J., Nakanishi M., Watanabe M., Ueda S.;
"An amino acid alteration of F protein responsible for the enhanced
"Lusoquenicity of measles virus.";
Submitted (AUG-1995) to the EMBL/GenBank/DDBJ databases.
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Ogura H.;
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11234;
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Sheng J., Watanabe M., Ueda S.;
"Selection of a neurotropic variant of measles virus.";
Submitted (AUG-1995) to the EMBL/GenBank/DDBJ databases.
                                                                                   Submitted (MAY-2001) to the EMBL/GenBank/DDBJ databases.
                                                                                                          EMBL, AY035887, AAK63190.1; -
INCERPO, IPRO00776; Fusion_gly.
Pfam: PF00523; fusion_gly.
SEQUENCE 546 AA; 58572 MW; 449B2B2DD7405F0B CRC64;
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Pfam; PF00523; fusion_gly; 1.
SEQUENCE 550 AA; 59530 MW; 97C991C7E2169839 CRC64;
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284 LSEIKGVIVHRLEGV 298
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Matches 15; Conservative
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Nucleotide sequences of the fusion protein gene of subacute
Nucleotide sequences of the fusion protein gene of subacute
sclerosing panencephalitis viruses: deduced amino acid sequences
showed the cytoplasmic domain highly mutated --truncated, elongated or
predicted secondary structure changed.";
Submitted (AuG-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AF179432; AAF02697.1; -.
HSSP; P04849; ISVF.
InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
SEQUENCE 550 AA; 59504 MW; 2AA969D37FA5CA17 CRC64;
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Pred. No. 1.1;
0; Mismatches 0; Indels
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11234;
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
EMBL, AF179436; AAF02701.1; ..
HSSP; P04849; 1SVF.
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Pfam; PF00523; fusion_gly; 1.
SEQUENCE 550 AA; 59405 MW; 0AE6DBFC5DD22BBA CRC64;
                                                                           Last sequence update)
Last annotation update)
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01-NAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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Pred. No.
                                                   Created)
PRT;
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                                              01-MAY-2000 (TrEMBLrel. 13, 01-MAY-2000 (TrEMBLrel. 13, 01-JUN-2001 (TrEMBLrel. 17, Fusion protein.
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SEQUENCE FROM N.A.
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Ogura H.; "Nucleotide sequences of the fusion protein gene of subacute sclerosing panencephalitis viruses: deduced amino acid sequences showed the cytoplasmic domain highly mutated --truncated, elongated or
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Mol. Gen. Mikrobiol. Virusol. 4:29-33(2000).
[2]
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                                                                         29.0%; Score 72; DB 12; Length 537; 100.0%; Pred. No. 1.1; tive 0; Mismatches 0; Indels
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBI_TaxID=11241;
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AR179440; AAF02705.1; -.
EMBL; AR179439; AAF02704.1; -.
HSSP; P04849; 1SVF.
InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
SEQUENCE 537 AA; 58275 MW; DOA60AC66D979E06 CRC64;
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
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Matches 15; Conservative
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Cell 55:255-265(1988).
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MEDLINE-89003063; Pubmed-3167982;
Cattaneo R., Schmid A., Eschle D., Baczko K., ter Meulen V.,
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MEDLINE-89003063; PubMed=3167982;
Cattaneo R., Schmid A., Eschle D., Baczko K., ter Meulen V.,
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11234;
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBI_TaxID=11234;
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EMBL; X16568; CAA34582.1; -.
HSSP; P04649; 1SVF.
InterPro: IPRO00776; Fusion_gly.
SEQUENCE 534 AA; 57899 MW; 637245E23B5BE044 CRC64;
                                                                                                                                                 01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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   22 HWSYGLSPGGK-RDLDSLSDTLGNIIERFPHVDSP 55
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Cattaneo R., Billeter M.A.;
Virology 0:0-0(0).
EMBL; X16567; CAR34574.1; -.
EMBL; X16567; CAR34575.1; -.
HSSP; P04849; 1SVF.
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Cattaneo R., Billeter M.A.;
Virology 0:0-0(0).
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01-NOV-1996 (TrEMBLrel. 01,
01-NOV-1996 (TrEMBLrel. 01,
01-JUN-2001 (TrEMBLrel. 17,
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Actinopterggii; Neopterggii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterggii; Percomorpha; Perciformes; Percoidei;
Sparidae; Sparus.
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09YI26
01-MAY-1999 (TrEMBLrel. 10, Created)
01-MAY-1999 (TrEMBLrel. 10, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
85GGRH (Gonadoliberin) (Gonadotropin-releasing hormone) (LH-RH)
5parus aurata (Gilthead sea bream).
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011380
Q8UW80
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O11383
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Q83533
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Q04244
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Q8JIF4
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098JW9
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SEQUENCE FROM N.A.
NCBI_TaxID=8175;
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266.163 Million cell updates/sec
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                                                                                       1 XHWSYGLRPGSSGPSLKLLS.......HRLEGVEGPSLHWSYGLRPX 47
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     GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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                                                                                                                         830525 seqs, 258052604 residues
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                                              September 24, 2003, 17:29:11
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Maximum Match 100%
Listing first 45 summaries
                                 - protein search, using sw model
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Q9QEW9
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RESULT 14
US-08-913-880C-13
Sequence 13, Application US/08913880C
Patent No. 637225
GENERAL INFORMATION:
APPLICANT: MATSUDA:
FITLE OF INVENTION: TETANUS TOXIN FUNCTIONAL FRAGMENT ANTIGEN AND TETANUS
TITLE OF INVENTION: VACCINE
FILE REFERENCE: 216-380P
CURRENT APPLICATION NUMBER: US/08/913,880C
NUMBER OF SEQ ID NOS: 17
LENGTH: 865
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APPLICANT: MATSUDA, MORIHIRO
TITLE OF INVENTION: TETANUS TOXIN FUNCTIONAL FRAGMENT ANTIGEN AND TETANUS
TITLE OF INVENTION: VACCINE
FILE REFERENCE: 216-380P
CURRENT APPLICATION NUMBER: US/08/913,880C
CURRENT FILING DATE: 1997-11-24
SEQ ID NO 12
LENGTH: 866
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41.6%; Score 114; DB 4; Length 866;
Best Local Similarity 95.5%; Pred. No. 5.4e-07;
Matches 21; Conservative 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 865;
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CTHER INFORMATION: Amino Acids 450 to 1315 of SEQ ID NO: 1

US-08-913-880C-12
                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Amino Acids 451 to 1315 of SEQ ID NO: 1 US-08-913-880C-13
                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match 41.6%; Score 114; DB 4; Length 86 Best Local Similarity 95.5%; Pred. No. 5.4e-07; Matches 21; Conservative 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                496 MENNETVSFWLRVPKVSASHLE 517
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16 LFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 15
US-08-913-880C-12
Sequence 12, Application US/08913880C
; Patent No. 6372225
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                                                                                                                                                                                                                                                                                                   TYPE: PRT ORGANISM: Clostridium tetani
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Search completed: September 24, 2003, 17:00:25 Job time: 14.9199 secs

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Gaps

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Score 114; DB 4; Length 858, Pred. No. 5.3e-07; 1; Mismatches 0; Indels

41.68; 95.58;

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; OTHER INFORMATION: Amino Acids 458 to 1315 of SEQ ID NO: US-08-913-880C-16
                                                                                                                                                                                                                                        16 LFNNFTVSFWLRVPKVSASHLE 37
                                       TYPE: PRT
ORGANISM: Clostridium tetani
                                                                                                                                                 Query Match
Best Local Similarity 95.55
Matches 21; Conservative
SEQ ID NO 16
LENGTH: 858
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LENGTH: 860
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQ ID NO 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TYPE: PRT
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                                                                            FEATURE:
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                    LENGTH:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 17.7 Application US/08913880C
Patent No. 6372225
GENERAL INFORMATION:
APPLICANT: MATSUDA, MOTINITO
TITLE OF INVENTION: TETANUS TOXIN FUNCTIONAL FRAGMENT ANTIGEN AND TETANUS
TITLE OF INVENTION: VACCINE
FILE REFERENCE: 216-380P
CURRENT APPLICATION NUMBER: US/08/913,880C
CURRENT FILING DATE: 1997-11-24
NUMBER OF SEQ ID NOS: 17
SEQ ID NO 17.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 155, Application US/08913880C
Patent No. 637225
GENERAL INFORMATION:
APPLICANT: MATSUDA, MORINICO
TITLE OF INVENTION: VACCINE
FILE REPERENCE: 216-380P
CURRENT APPLICATION NUMBER: US/08/913,880C
CURRENT FILING DATE: 1997-11-24
NUMBER OF SEQ ID NOS: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          y Match 41.6%; Score 114; DB 4; Length 853; Local Similarity 95.5%; Pred. No. 5.3e-07; nes 21; Conservative 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; OTHER INFORMATION: Amino Acids 463 to 1315 of SEQ ID NO: 1 US-08-913-880C-17
                                                                                                                                                                                00786/269001
                APPLICATION NUMBER: US/08/668,381A FILING DATE: 21-JUN-1996 CLASSIFICATION: 514
                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: 60/000,473
FILING DATE: 23-JUN-1995
ATTORNEY/AGENT INFORMATION:
NAME: Clark, Paul T.
REGISTRATION NUMBER: 30,164
REFRENCE/DOCKET NUMBER: 00786/2/
TELECOMMUNICATION INFORMATION:
TELEPHONE: 617/542-5070
TELEPAX: 617/542-8906
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           484 MFNNFTVSFWLRVPKVSASHLE 505
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        16 LFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  16 LFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                           TELEX: 200154
INFORMATION FOR SEQ ID NO: 5: SEQUENCE CHARACTERISTICS: TENTH: 618 amira
                                                                                                                                                                                                                                                                          ORGANISM: Clostridium tetani
 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                             ; MOLECULE TYPE: protein US-08-668-381A-5
                                   FILING DATE: 21 CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             US-08-913-880C-17
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                                                                                      GENERAL INFORMATION:
APPLICANT: MATSUDA, MOTINITO
TITLE OF INVENTION: TETANUS TOXIN FUNCTIONAL FRAGMENT ANTIGEN AND TETANUS
TITLE OF INVENTION: TOXON: VACCINE
FILE REFERENCE: 216-380P
CURRENT FILING NUMBER: US/08/913,880C
CURRENT FILING DATE: 1997-11-24
NUMBER OF SEQ ID NOS: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: MATSUDA, MORINIRO
TITLE OF INVENTION: TETANUS TOXIN FUNCTIONAL FRAGMENT ANTIGEN AND TETANUS
TITLE OF INVENTION: VACCINE
FILE REFERENCE: 216-380P
CURRENT APPLICATION NUMBER: US/08/913,880C
CURRENT FILING DATE: 1997-11-24
NUMBER OF SEQ ID NOS: 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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1 Similarity 95.5%; Pred. No. 5.3e-07;
21; Conservative 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  41.6%; Score 114; DB 4; Length 860; 95.5%; Pred. No. 5.3e-07;
tive 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                 ; 'OTHER INFORMATION: Amino Acids 456 to 1315 of SEQ ID NO: 1 US-08-913-880C-15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; OTHER INFORMATION: Amino Acids 454 to 1315 of SEQ ID NO: US-08-913-880C-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 12
US-08-913-880C-15
; Sequence 15, Application US/08913880C
; Patent No. 6372225
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  US-08-913-880c-14; Sequence 14, Application US/08913880C; Patent No. 6372225
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                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TYPE: PRT ORGANISM: Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
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95.5%; Pred. No. 2.4e-07;
tive 1; Mismatches 0; Indels
                                    STATE: Virginia
COUNTRY: U.S.A.
ZIP: 22201-4714
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
SOFTWARE: PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/280,228
FILING DATE: 25-JUL.1994
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PatentIn Release #1.0, Version #1.30
    1100 No. 5571694th Glebe Road
                                                                                                                                                                                                                                                              CLASSIPLECATION: 433
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/618,312
FILING DATE: 27-NOV-1990
CLASSIFICATION 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: GB 8926832.0
FILING DATE: 28-NOV-1989
PRIOR APPLICATION NUMBER: GB 9006097.1
FILING DATE: 17-MAR-1990
ATTORNEY/AGENT INFORMATION:
NAME: Wilson, Mary J.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER: 32,955
REFERENCE/DOCKET NUMBER: 117-163
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 816-4000
TELEFAX: (703) 816-4100
TELEEX: 200797 NIXN UR
INFORMATION FOR SEQ ID NO: 4:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               E: Fish & Richardson P.C. 225 Franklin Street
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
LENGTH: 452 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 95.55
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; MOLECULE TYPE: protein US-08-280-228-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OPERATING SYSTEM:
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                        Arlington
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY: USA
ZIP: 02110-2804
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ADDRECT: 220
TTREET: 220
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95.5%; Pred. No. 2.4e-07;
                                                                                                                                                                                                                                                                                                                                                                                     SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/280,228
FILING DATE: 25-JUL-1994
CLASSIFICATION: 435
                                                                                                                                                                                           ADDRESSEE: NIXON & VANDERHYE P.C. STREET: 1100 No. 5571694th Glebe Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/618,312
FILING DATE: 27-NOV-1990
CLASSIFICATION TATA:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: GB 926832.0
FILING DATE: 28-NOV-1989
PRIOR APPLICATION NUMBER: GB 906697.1
FILING DATE: 17-MAR-1990
ATTORNEY, AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 4, Application US/08280228
| Patent No. 5571694
| GENERAL INFORMATION:
| APPLICANT: Makoff Dr, Andrew J
| APPLICANT: Clare Dr, Jeffrey J
| APPLICANT: Fairweather Dr, Neil F
| TITLE OF INVENTION: VACCINES
| NUMBER OF SEQUENCES: 13
| CORRESONENCE ADDRESS:
| ADDRESSEE: NIXON & VANDERHYE P.C.
                                GENERAL INFORMATION:
APPLICANT: Makoff Dr, Andrew J
APPLICANT: Romanos Dr, Michael A
APPLICANT: Clare Dr, Jeffrey J
APPLICANT: Fairweather Dr, Neil F
TITLE OF INVENTION: VACCINES
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NIXON & VANDERHYE P.C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            16 LFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REFERENCE/DOCKET NUMBER: 117
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 816-4100
TELEFAX: (703) 816-4100
TELEX: 200797 NIXN UR
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
Sequence 2, Application US/08280228
Patent No. 5571694
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Wilson, Mary J. REGISTRATION NUMBER: 32,955
                                                                                                                                                                                                                                CITY: Arlington,
STATE: Virginia
COUNTRY: U.S.A.
ZIP: 22201-4714
COMPUTER READABLE FORM:
MEDLUM TYPE: FLORPY disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                : 452 amino acids
amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 95.5
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-280-228-2
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US-08-280-228-4
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APPLICANT: FAIRWEATHER, Neil Fraser
APPLICANT: MAKOFF, Andrew Joseph
TITLE OF INVENTION: Expression of tetanus toxin fragment C
NUMBER OF SEQUENCES: 8
CORRESSONDENCE ADDRESS:
ADDRESSEE: Nixon & Vanderhye P.C.
STREET: 1100 No. 5443966th Glebe Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 114; DB 1; Length 452;
Pred. No. 2.4e-07;
1; Mismatches 0; Indels
                                                                         Length 452;
                                                                                                                  0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IB PC Compatible
COMPUTER: IB PC Compatible
COMPUTER: Patentin PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/110,786A
FILING DATE: 23-AUG-1993 1991
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/77,337
FILING DATE: 29-NOV-1991
PRIOR APPLICATION NUMBER: PCT/GB90/00943
FILING DATE: 20-UN-1990
PROR APPLICATION NUMBER: GB 8914122.0
APPLICATION NUMBER: GB 8914122.0
                                                                    Score 114; DB 1;
Pred. No. 2.4e-07;
1; Mismatches 0;
                                                                                                                                                                                    83 MFNNFTVSFWLRVPKVSASHLE 104
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME: Mary J. Wilson
RECISTRATION NUMBER: 32,955
REFERENCE/DOCKET NUMBER: 117-134
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                16 LFNNFTVSFWLRVPKVSASHLE 37
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                                                                                                                                                                                                                                                                                                                  Sequence 8, Application US/08110786A Patent No. 5443966 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 20 June 1989 ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELEPHONE: (703) 816-4000
TELEFAX: (703) 816-4100
TELEX: 200797 NIXN UR
INFORMATION FOR SEQ ID NO: 8:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 95.5%;
Matches 21; Conservative
                                                                    Query Match
Best Local Similarity 95.5%;
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    452 amino acids amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
; MOLECULE TYPE: protein US-07-618-312A-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STREET: 1100 NO CITY: Arlington STATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: U.S.A. ZIP: 22201-4714
                                                                                                                                                                                                                                                                                                US-08-110-786A-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-110-786A-8
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41.6%; Score 114; DB 1; Length 452;
Best Local Similarity 95.5%; Pred. No. 2.4e-07;
Matches 21; Conservative 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/618,312A
FILING DATE: 19910516
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 19910516
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: GB 8926832.0
FILING DATE: 28-NOV-1989
PRIOR APPLICATION DATA:
FILING DATE: 17-MAR-1990
ATTORNEY/AGENT INFORMATION:
                    FILING DATE: 17-WAR-1990
ATTORNEY/AGENT INFORMATION:
NAME: CTAWford Mr, Arthur R
REGISTRATION NUMBER: 25,327
REFERENCE/DOCKET NUMBER: 510-51
TELECOMMONICATION INFORMATION:
TELEPHONE: 0101 703 8750400
TELEFAX: 0101 703 5253468
TELEX: 200797 NIXN UR
TELEX: 200797 NIXN UR
INFORMATION FOR SEQ ID NO: 2:
SEGUENCE CHARACTERISTICS:
LENGTH: 452 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3: 14th Floor
2200 Clarendon Boulevard,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GB 9006097.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Romanos Dr, Michael A
APPLICANT: Clare Dr, Jeffrey J
APPLICANT: Fairweather Dr, Neil F
TITLE OF INVENTION: VACCINES
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16 LFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    510-51
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 4, Application US/07618312A
Patent No. 3889540
GENERAL INFORMATION:
APPLICANT: Makoff Dr, Andrew J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Crawford Mr, Arthur R
REGIESTRATION NUMBER: 25,327
REFRENCE/DOCKET NUMBER: 510-5
TELECOMMUNICATION INPORMATION:
TELEPRONE: 0101 703 8750400
TELEFAX: 0101 703 5253468
TELEX: 200797 NIXN UR
INPORMATION FOR SEQ ID NO: 4:
                                                                                                                                                                                                                                                                      : 452 amino acids
AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LENGTH: 452 amino acids TYPE: AMINO ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ADDRESSEE: 14th Floor STREET: 2200 Clarendon CITY: Arlington, STATE: Virginia CONNTRY: U.S.A. ZIP: 22201 COMPUTER READABLE FORM: MEDIUM TYPE: Floopy di
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                  MOLECULE TYPE: protein
    APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear
                                                                                                                                                                                                                                                                                           TYPE: AMI
TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                         US-07-618-312A-2
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US-07-618-312A-4
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Score 114; DB 5; Length 31;
Pred. No. 8.8e-09;
1; Mismatches 0; Indels
                                                                                                                            MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC COMPAtible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30B
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/618,312A
FILING DATE: 19910516
                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/984,852
FILING DATE: 02-DEC-1992
ATTONNEY/AGENT INFORMATION:
NAME: Green, Grant D.
REGISTRATION NUMBER: 31,259
RECERBENE/POCKET NUMBER: 0222.101
TELECHMUNICATION INFORMATION:
TELEPHONE: 510-655-3542
                                                                                                                                                                                                                                  FILING DATE: 28-DEC-1993
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Makoff Dr, Andrew J
APPLICANT: Romanos Dr, Michael A
APPLICANT: Clare Dr, Joffrey J
APPLICANT: Fairweather Dr, Neil F
TITLE OF INVENTION: VACCINES
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
APPLICATION NUMBER: GB 8926832.0
FILING DATE: 28-NOV-1989
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ADDRESSEE: 14th Floor
STREET: 2200 Clarendon Boulevard,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6 MFNNFTVSFWLRVPKVSASHLE 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       16 LFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 2, Application US/07618312A Patent No. 5389540 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             41.68;
STREET: 4560 Horton St
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local Similarity 95.5
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 31 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TELEFAX: 510-655-3542 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRANDEDNESS: single
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE: peptide PCT-US93-11703-64
                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: Arlington,
STATE: Virginia
COUNTRY: U.S.A.
                       Emeryville
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         amino acid
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                                                                  USA
                                                                                        94608
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                                                                COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        RESULT 4
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                                                                                                    GENERAL INCORPATION:
APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
NUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ij
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                                                                                                                                                                                                                                                                                                                                                                                                                        COMPUTER FEALABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Eloppy disk
COMPUTER: Eloppy disk
COMPUTER: Eloppy disk
COMPUTER: Elb PC compatible
COMPUTER: PatentIn Release #1.0, Version #1.25
SOFTWARE: PatentIn Release #1.0, Version #1.25
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURSTRICATION DATA:
APPLICATION NUMBER: US/08/488,351A
FILING DATE: 7-JUN-1995
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/229,275
FILING DATE: 14-APR-1994
CLASSIFICATION: 424
PRIOR APPLICATION UNMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION: 424
PRIOR APPLICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION NUMBER: 29,323
BREFEDRATION NUMBER: 29,323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match 55.5%; Score 152; DB 2; La
Best Local Similarity 87.9%; Pred. No. 6.6e-14;
Matches 29; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            17 FNNFTVSFWLRVPKVSASHLEGPSLHWSYGLRP 49
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PCT-US93-11703-64
; Sequence 64, Application PC/TUS9311703
GENERAL INFORMATION:
APPLICANT: Chiron Mimotopes Pty. Ltd.; TITLE OF INVENTION:
NUMBER OF SEQUENCES: 75
CORRESPONDENCE ADDRESS:
                                                              Sequence 14, Application US/08488351A Patent No. 5843446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)415-8745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO: 14: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                         ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Grant D. Green
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (516)751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                32 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY: linear
MOLECULE TYPE: peptide
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                                                                                                                                                                                                                                                                                                                                                                                                         10154-0053
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                RESULT 2
US-08-488-351A-14
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      US-08-488-351A-14
                                                                                                                                                                                                                                                                                                                                                                                      COUNTRY:
                                                                                                                                                                                                                                                                                                                                         CITY: N
STATE:
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September 24, 2003, 16:46:20; Search time 14.8199 Seconds (without alignments) 142.750 Million cell updates/sec
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1 XHWSYGLRPGSSGPSLFNNF......VSASHLEGPSLHWSYGLRPX 50
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GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                                                                                                                                                                                                     Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                  328717 seqs, 42310858 residues
                                                                                   OM protein - protein search, using sw model
                                                                                                                                                                                                                                                                                                  BLOSUM62
Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB seq length: 0 Maximum DB seq length: 20000000000
                                                                                                                                                                                                              Title:
Perfect score:
                                                                                                                                                                                                                                                                                                    Scoring table:
                                                                                                                                                                                                                                                          Sequence:
                                                                                                                                                                                                                                                                                                                                                                Searched:
                                                                                                                           Run on:
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution. 1: /cgg_2_6/ptcdata/1/laa/5A_COMB.pep:*
2: /cgn2_6/ptcdata/1/laa/5B_COMB.pep:*
3: /cgn2_6/ptcdata/1/laa/6A_COMB.pep:*
4: /cgn2_6/ptcdata/1/laa/6B_COMB.pep:*
5: /cgn2_6/ptcdata/1/laa/PCTUS_COMB.pep:*
6: /cgn2_6/ptcdata/1/laa/PCTUS_COMB.pep:*

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Issued_Patents_AA:*

Database

	Description	Sequence 14, Appl	14,	64,	2, A	4	Sequence 8, Appli	7	4	5,	Sequence 17, Appl	16	15	14	13	12	11	٠,	ń	H	12	æ	ď,	Sequence 5, Appli	ď,	3,	12,	Sequence 10, Appl
SUMMARIES	ID	US-08-446-692-14	US-08-488-351A-14	PCT-US93-11703-64	US-07-618-312A-2	US-07-618-312A-4	US-08-110-786A-8	US-08-280-228-2	US-08-280-228-4	US-08-668-381A-5	US-08-913-880C-17	US-08-913-880C-16	US-08-913-880C-15	US-08-913-880C-14	US-08-913-880C-13	US-08-913-880C-12	US-08-913-880C-11	US-08-913-880C-10	US-08-913-880C-1	US-07-610-525-1	US-08-661-052-12	US-08-460-502-8	-08	US-09-089-595-5	-38	US-09-183-714B-5	-09-188-	US-09-171-969-10
	DB	-	7	S	-	Н	-	-	Н	Н	7	4	4	4	4	4	4	4	4	٦	7	7	7	m	3	m	m	e
	Length DB	32	32	31	452	452	452	452	452	618	853	828	860	862	865	998	874	875	1315	21	21	21	21	21	21	21	21	21
ф	Query	55.5	55.5	41.6	41.6	41.6	41.6				41.6		41.6							40.9	40.9	40.9	40.9	40.9	40.9		•	40.9
	Score	152	152	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	114	112	112	112	112	112	112	112	112	112
	Result No.	П	7	e	4	Ŋ	9	7	80	о	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	56	27

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Gaps

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Query Match 55.5%; Score 152; DB 1; Length 32; Best Local Similarity 87.9%; Pred. No. 6.6e-14; Matches 29; Conservative 0; Mismatches 0; Indels

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Sequence 12, Appl Sequence 5, Appl Sequence 12, Appl Sequence 3, Appl Sequence 5, Appl Sequence 5, Appl Sequence 5, Appl Sequence 5, Appl Sequence 6, Appl Sequence 16, Appl Sequence 14, Appl Sequence 4, Appli Sequence 4, Appli		constructs immune stimulators for vaccines 1.25
4 US-09-364-088-12 4 US-09-162-281-5 4 US-09-102-716-12 4 US-08-432-483A-3 4 US-09-148-711A-8 4 US-09-589-717-5 4 US-08-946-289-3 5 PCT-US9-11703-66 1 US-08-446-692-5 2 US-08-108-351A-5 2 US-08-108-4118-3 3 PCT-US95-13841-8 5 PCT-US95-13841-8 5 US-09-109-116-4 6 US-09-138-116-4 6 US-09-381-116-4 7 US-09-381-912-16 1 US-08-694-865-4 2 US-08-694-865-4	ALIGNMENTS	LHRH peptide ic universal .0, Version # .692
112 40.9 112 40.9 112 40.9 112 40.9 112 40.9 112 40.9 113 40.9 114 40.9 115 40.9 116 40.9 117 40.9 118 40.9 119 39.1 107 39.1 108 36.9 109 49 101 36.9 101 36.9		pplication US, 9551 MATION: Ladd, Anna Wand, Timothy, VEWITON: nmd VEWITON: nmd VEWITON: and EQUENCES: 114 MATION: ANDIRES: 1345 Park Avent WYORK WYORK TON
28 29 30 30 30 30 30 30 30 44 44 44 45 10 10 10		US-08-446-692-14 Sequence 14, Appl Sequence 14, Appl Patent No. 575955 GENERAL INFORMAT APPLICANT: La CORRESPONDENCE CORRESPONDENCE CONTRY: US CITY: New Y COUNTRY: US CITY: New Y COUNTRY: US CITY: New Y COUNTRY: US COMPUTER READAMEDIUM TYPE: CLASSIFICATION REFERENCE/DO TELEPHONE: TELEPHONE: ATION REFERENCE/DO TELEPHONE:

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Sequence 3, Application US/09943548
Patent No. US200200042364A1
PAPLICANT: INFORMATION:
APPLICANT: Rittershaus, Charles W.
APPLICANT: Thomas, Lawrence J.
TITLE OF INVENTION: MODULATION OF CHOLESTERYL ESTER TRANSFER PROTEIN (CETP) ACTIVI.
FILE REFERENCE: TCS-411.1P US-1; Tcs-411.1P US-2
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95.5%; Pred. No. 2e-05;
tive 1; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 141, Application US/10241596
Publication No. US20030166238A1
APPLICANT: Microbiological Research Authority
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PRIOR PALLICATION NUMBER: US 09/255,829
PRIOR APPLICATION NUMBER: US 09/242,689
PRIOR PALLING DATE: 1999-02-23
PRIOR PAPLICATION NUMBER: PCT/GB97/02273
PRIOR PALLICATION NUMBER: PCT/GB97/02273
PRIOR PAPLICATION NUMBER: US 08/782,893
PRIOR PAPLICATION NUMBER: US 08/782,893
PRIOR PALLICATION NUMBER: GB 9625996.5
PRIOR PALLICATION NUMBER: GB 9625996.5
PRIOR PALLICATION NUMBER: GB 9617671.4
PRIOR PLING DATE: 1996-12-13
PRIOR PLING DATE: 1996-12-13
PRIOR PLING DATE: 1996-12-13
PRIOR PLING DATE: 1996-08-23
NUMBER OF SEC ID NOS: 175
SOFTWARE: PatentIn version 3.1
PRIOR FILING DATE: 2000-12-04
PRIOR APPLICATION NUMBER: GB 9928530.6
PRIOR FILING DATE: 1999-12-02
PRIOR APPLICATION NUMBER: GB 008658.7
PRIOR FILING DATE: 2000-04-07
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PATENTIN VETSION 3.0
                                                                                                                                                                                                                                                                                              ; OTHER INFORMATION: synthetic construct US-10-130-973A-16
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ORGANISM: Artificial Sequence
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Matches 21; Conservative
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US-10-241-596-141
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US-09-943-548-3
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APPLICANT: Shone, Clifford
APPLICANT: Sutton, John
APPLICANT: Sutton, John
APPLICANT: Sutton, John
APPLICANT: Silman, Nigel
APPLICANT: Silman, Nigel
TITLE OF INVENTION: Constructs for Delivery of Therapeutic Agents to Neuronal Cells
FILE REFERENCE: 1581.092000
CURRENT APPLICATION NUMBER: US/10/130, 973A
CURRENT FILING DATE: 2002-10-21
PRIOR APPLICATION NUMBER: ET/GB00/04644
PRIOR APPLICATION NUMBER: GB 9928530.6
PRIOR APPLICATION NUMBER: GB 9928530.6
PRIOR APPLICATION NUMBER: GB 008658.7
PRIOR FILING DATE: 2000-10-07
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PatentIn version 3.0
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APPLICANT: Shore, Clifford
APPLICANT: Sutton, John
APPLICANT: Sliman, Nigel
TITLE OF INVENTION: Constructs for Delivery of Therapeutic Agents to Neuronal Cells
FILE REFERENCE: 1581.092000
CURRENT APPLICATION NUMBER: US/10/130,973A
CURRENT FILING DATE: 2002-10-21
PRIOR APPLICATION NUMBER: PCT/GB00/04644
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95.5%; Pred. No. 1.6e-05;
Live 1; Mismatches 0; Indels 0
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    PRIOR APPLICATION NUMBER: GB 9928530.6
                      PRIOR FILING DATE: 1999-12-02
PRIOR APPLICATION NUMBER: GB 008658.7
PRIOR FILING DATE: 2000-04-07
NUMBER OF SEQ ID NOS: 18
SOFWARE: Patentin version 3.0
SEQ ID NO 5
LENGTH: 907
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, Sequence 16, Application US/10130973A
; Publication No. US20030147895A1
; GENERAL INFORMATION:
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Matches 21; Conservative
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nes 21; Conservative
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US-10-130-973A-3
US-10-130-973A-3
Sequence 3, Application US/10130973A
Sequence 3, Application US/10130973A
Publication No. US20030147895A1
GENERAL INFORMATION:
APPLICANT: Shone, Clifford
APPLICANT: Silman, Nigel
TITLE OF INVENTION: Constructs for Delivery of Therapeutic Agents to Neuronal Cell
FILE REFERENCE: 1581.0920000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Shone, Clifford
APPLICANT: Shone, Clifford
APPLICANT: Shone, John
APPLICANT: Silman, Nigel
TITLE OF INVENTION: Constructs for Delivery of Therapeutic Agents to Neuronal Cell
FILE REFERENCE: 1581.092000
CURRENT APPLICATION NUMBER: US/10/130,973A
CURRENT FILING DATE: 2002-10-21
PRIOR FILING DATE: 2000-110-21
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Pred. No. 9.4e-06;
1; Mismatches 0;
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95.5%; Pred. No. 1.3e-05;
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CURRENT FILING DATE: 2002-10-21
PRIOR APPLICATION NUMBER: PCT/GB00/04644
PRIOR FILING DATE: 2000-12-04
PRIOR RILING DATE: 1999-12-02
PRIOR FILING DATE: 1999-12-02
PRIOR FILING DATE: 2000-04-07
NUMBER: GE SEQ ID NOS: 18
SEQ ID NO 3
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                                                                                                                                                                                                               ; OTHER INFORMATION: Synthetic construct US-10-130-973A-9
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                          008658.7
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  PRIOR FILING DATE: 1999-12-02
PRIOR APPLICATION NUMBER: GB 00
PRIOR FILING DATE: 2000-04-07
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PatentIn version 3.0
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95.58;
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ORGANISM: Artificial Sequence
                                                                                                                                                    TYPE: PRT
ORGANISM: Artificial Sequence
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Best Local Similarity 95.59
Matches 21; Conservative
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Matches 21; Conservative
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APPLICANT: Shone, Clifford
APPLICANT: Sutton, John
APPLICANT: Sutton, John
TITLE OF INVENTION:
TITLE OF INVENTION: Constructs for Delivery of Therapeutic Agents to Neuronal Cells
FILE REFERENCE: 1581.0920000
CURRENT PELLORION NUMBER: US/10/130,973A
CURRENT PELLORION NUMBER: DCT/GB00/04644
PRIOR FILING DATE: 2000-12-04
PRIOR FILING DATE: 1999-12-02
PRIOR FILING DATE: 1999-12-02
PRIOR APPLICATION NUMBER: GB 9928530.6
PRIOR APPLICATION NUMBER: GB 008658.7
PRIOR APPLICATION NUMBER: GB 008658.7
NUMBER OF SEQ ID NOS: 18
SOFTWARE: Patentin version 3.0
SEQ ID NO 11
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; Publication No. US20030147895A1
; GENERAL INFORMATION:
; APPLICANT: Shone, Clifford
; APPLICANT: Sliman, Nigel
; FILE REFERENCE: 1581.0920000
; CURRENT APPLICATION NUMBER: US/10/130,973A
; CURRENT FILING DATE: 2002-10-21
; PRIOR APPLICATION NUMBER: CFT/GB00/04644
; PRIOR APPLICATION NUMBER: GB 9928530.6
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Pred. No. 6.3e-06;
1; Mismatches 0; Indels
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                                     PRIOR APPLICATION NUMBER: 60,065,236
PRIOR FILING DATE: 1997-11-13
NUMBER OF SEQ ID NOS: 19
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 2
LENGTH: 463
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US-10-130-973A-11
Sequence 11, Application US/10130973A
Publication No. US20030147895A1
PRIOR APPLICATION NUMBER: 60/055,615 PRIOR FILING DATE: 1997-08-14
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1 Similarity 95.5%;
21; Conservative 1
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ORGANISM: Artificial Sequence
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; ORGANISM: Clostridium tetani
US-09-816-467-2
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nes 21; Conserv
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Matches 21; Conserv
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OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of I-mm OTHER INFORMATION: GRRH linked by a spacer to amino acid sequence 378-398 of PLBs OTHER INFORMATION: ium falciparum circumsporozoite (CSP) protein
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OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTIDE
LOCATION: (17)...(36)
OTHER INFORMATION: Amino acid sequence 378-398 of the Plasmodium falciparum
OTHER INFORMATION: circumsporozoite (CSP) protein
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OTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH hormone
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Publication No. US2030004121A1
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: COEN, LAURENT
APPLICANT: PINZOLAS, ROSARIO OSTA
APPLICANT: BRUCET, PHILIPPE
TITLE OF INVENTION: TRANSYNAPTICALLY INTO THE CNS
FILE REFERENCE: 03495.0174-01000
CURRENT APPLICATION NUMBER: US/09/816,467
CURRENT FILING DATE: 2001-03-26
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     49
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            50.5%; Score 138.5; DB 9; Length 51; 54.7%; Pred. No. 5.4e-10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    11; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      LOCATION: (1)..(1) OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline NAMEXKEY: MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 LOCATION: (51)..(51)
OTHER INFORMATION: Amidated glycine or glycinamide
NAME/KEY: PEPTIDE
                                                                                                                                                                                                                         GENERAL INFORMATION:
APPLICANT: Aphton Corporation
TILE OF INFORMATION:
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin Version 3.0
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                                                                                                                                                      US-09-848-834A-20; Sequence 20, Application US/09848834A; Patent No. US20020076416A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LOCATION: (37)..(42)
OTHER INFORMATION: Spacer peptide
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Matches 29; Conserv
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LOCATION: (1)..(1)
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SEQ ID NO 20
LENGTH: 51
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US-09-816-467-2
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OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
NAME/KEY: MOD_RES
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LOCATION: (19)..(34)
OTHER INFORMATION: Amino acid sequence 288-302 of the Measles virus fusion protein,
                                     NAME/KE: PEPTIDE

LOCATION: (17)..(31)

OTHER INFORMATION: Amino acid sequence 830-844 of the Tetanus toxoid precursor OTHER INFORMATION: (Tentoxylysin)

NAME/KE: PEPTIDE

LOCATION: (32)..(37)

OTHER INFORMATION: Spacer peptide

NAME/KE: PEPTIDE

LOCATION: (38)..(46)

OTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH hormone
US-09-848-834A-19
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OTHER INFORMATION: Amidated-glycine or glycinamide
NAME/KEY: PEPTIDE
LOCATION: (1)...(10)
OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone
NAME/KEY: PEPTIDE
LOCATION: (11)...(18)
OTHER INFORMATION: Spacer peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 47;
                                                                                                                                                                                                                                                                                                                                                            Query Match 52.9%; Score 145; DB 9; Length 46; Best Local Similarity 60.4%; Pred. No. 7.6e-11; Matches 29; Conservative 6; Mismatches 9; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REPRENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 17, Application US/09848834A Patent No. US20020076416A1 GENERAL INFORMATION:
LOCATION: (11)..(16)
OTHER INFORMATION: Spacer peptide
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OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTIDE
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OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of hum OTHER INFORMATION: GARH Linked by a spacer to amino acid sequence 830-844 of Teta OTHER INFORMATION: toxold precursor (Tentoxylysin) linked by a spacer to amino ac OTHER INFORMATION: sequence 1-10 of GARH

NAME/KEY: MOD_RES
                                                                                                                                                                                                                                            OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 947-967 OTHER INFORMATION: Tetanus toxold precursor (Tentoxylysin) linked by a spacer OTHER INFORMATION: Ino acid sequence 2-10 of the GRRH hormone NAME/KEY: MOD_RES
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                                                                                                                                                                                                                                                                                                                                                                                                           LOCATION: (1)..(21) OTHER INFORMATION: Amino acids 947-967 of the Tetanus Toxoid Precursor OTHER INFORMATION: (Tentoxylysin)
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LOCATION: (1)..(10)
OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone
NAME/KEY: PEPTIDE
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OTHER INFORMATION: Amino acids 2-10 of the human GnRH hormone
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OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
NAME/KEY: MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NAME/KEY: MOD_RES
LOCATION: (34)...(34)
OTHER INFORMATION: Amidated glycine or glycinamide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LOCATION: (46)...(46)
OTHER INFORMATION: Amidated glycine or glycinamide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens;
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: PatentIn version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 185; DB 9;
Pred. No. 6.4e-16;
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100.0%; Pred. No. ...
0; Mismatches
                                                                                                                                                                                                                                                                                                                                        LOCATION: (1)..(1)
OTHER INFORMATION: Amidated phenylalanine
NAME/KEY: PEPTIDE
    CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION UNBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: PatentIn version 3.0
LENGTH: 34
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OTHER INFORMATION: Spacer peptide
                                                                                                                                                                                               ORGANISM: Artificial Sequence
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Best Local Similarity
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NAME/KEY: MOD_RES

OCATION: (1)...(1)

OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline

NAME/KEY: PEPTIDE
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OTHER INFORMATION: Amino acid sequence 947-967 of the Tetanus toxoid precursor OTHER INFORMATION: (Tentoxylysin)
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CTHER INFORMATION: oxylysin

NAME/KEY: PEPTIDE

LOCATION: (38)...(41)

OTHER INFORMATION: Spacer peptide

NAME/KEY: PEPTIDE

LOCATION: (42)...(50)

CTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH hormone US-09-848-834A-18
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OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone
NAME/KRY: PEPTIDE
LOCATION: (11)..(16)
OTHER INFORMATION: Spacer peptide
NAME/KRY: PEPTIDE
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                                                                                                                                                                                                                                                                                                                                             2 HWSYGLRPGSSGPSLFNNFTVSFWLRVPKVSASHLEGPSLHWSYGLRP 49
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                                                                                                                                                                                                                                                                                                               2 HWSYGLRPGSSGPSLFNNFTVSFWLRVPKVSASHLEGPSLHWSYGLRP
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                                                                                                                                                                                                                 99.3%; Score 272; DB 9; Length 50
100.0%; Pred. No. 1.9e-26;
Live 0; Mismatches 0; Indels
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Patent No. US20020076416A1
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION:
CURRENT FILING NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR PILING DATE: 2000-05-05
PRIOR FILING DATE: 2000-05-05
PRIOR FILING DATE: 2000-05-05
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100.0%; Pred. No. 1.3e-17;
tive 0; Mismatches 0;
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GENERAL INFORMATION:
APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
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SOFWMARE: Patentin version 3.0
SEQ ID NO 14
LENGTH: 37
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Best Local Similarity 100.(
Matches 48; Conservative
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Matches 36; Conserv
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US-09-848-834A-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                     US-09-848-834A-14
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GenCore version 5.1.6

Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: September 24, 2003, 16:57:10; Search time 25.0693 Seconds (without alignments)
301.778 Million cell updates/sec
Title: US-09-848-834A-18
Perfect score: 274
1 XHWSYGLRPGSSGPSLFNNF.....VSASHLEGPSLHWSYGLRPX 50
Scoring table: BLOSUM62
Gapop 10.0, Gapext 0.5
Searched: 566894 seqs, 151307093 residues
Total number of hits satisfying chosen parameters: 566894
Minimum DB seq length: 2000000000
Maximum DB seq length: 2000000000
Post-processing: Minimum Match 0%
Listing first 45 summaries
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Published_Applications_AA:*

| (Sqn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*
| (Sqn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*
| (Sqn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:*
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| (Sqn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*
| (Sqn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*) | (Sgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB.pep:*) | (Sgn2_6/ptodata/2/pubpaa/US10B_PUBCOMB

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	Sequence 18, Appl Sequence 11, Appl Sequence 10, Appl Sequence 17, Appl Sequence 20, Appl Sequence 21, Appl Sequence 21, Appl Sequence 3, Appl Sequence 3, Appl Sequence 3, Appl Sequence 17, Appl Sequence 17, Appl Sequence 17, Appl Sequence 17, Appl Sequence 11, Appl	
ID	US-09-848-834A-18 US-09-848-834A-10 US-09-848-834A-10 US-09-848-834A-10 US-09-848-834A-17 US-09-848-834A-20 US-09-848-834A-20 US-09-818-83A-20 US-10-130-973A-11 US-10-130-973A-3 US-10-130-973A-3 US-10-130-973A-15 US-10-130-973A-16 US-10-130-973A-16 US-10-130-973A-16 US-10-130-973A-16 US-10-130-973A-17	
DB	00000001111100	
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Score	272 1992 1853 1853 1865 1974 1974 1974 1974 1974 1974 1974 1974	
Result No.	2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	

Sequence 4, Appli Sequence 6, Appli Sequence 2, Appli Sequence 6, Appli Sequence 5, Appli	4,8,4	13, 11, 35,	Sequence 34, Appl Sequence 20, Appl Sequence 12, Appl Sequence 15, Appl	Sequence 13, App. Sequence 16, App. Sequence 26, App. Sequence 29, Appl. Sequence 30, Appl.	31, 43, 44, 9, Ap	Sequence 12, Appl Sequence 4, Appli Sequence 18, Appl
9 US-09-848-834A-4 10 US-09-785-215-6 12 US-09-405-986-2 12 US-10-223-809A-6 12 US-10-261-208-5		11 US-09-305-924-13 9 US-09-019-010-4 11 US-09-305-924-11 11 US-09-964-201A-35	11 US-09-964-201A-34 14 US-10-044-034-20 11 US-09-747-802-12 9 US-09-848-834A-15	9 US-09-848-834A-13 9 US-09-848-834A-16 11 US-09-964-201A-26 11 US-09-964-201A-29 11 US-09-964-201A-30	11 US-09-964-201A-31 10 US-09-909-460-43 10 US-09-909-460-44 0 US-09-848-834A-9 9 US-09-848-834A-11	9 US-09-848-834A-12 11 US-09-305-924-4 11 US-09-910-186A-18
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112 40.9 112 40.9 112 40.9 112 40.9 112 40.9	112 40.9 112 40.9 112 40.9 107 39.1	102.5 37.4 101 36.9 101 36.9 97 35.4	97 35.4 95.5 34.9 88 32.1 87 31.8	~~ v v v v	85 31.0 79 28.8 79 28.8 73 26.6	73 26.6 71 25.9 67 24.5
16 17 18 19 20	21 22 24 24	25 1(26 27 28	3 3 3 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	3 3 3 3 3 3 3 3 4 3 3 5 4 3 3 5 5 4 3 5 5 5 5	38 39 41 42	43 44 5

ALIGNMENTS

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Proc. Natl. Acad. Sci. U.S.A. 69:278-282(1972).
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    BOTULINUM NEUROTOXIN E, LIGHT-CHAIN.
ZINC (CATALYTIC) (BY SIMILARITY).
BY SIMILARITY.
ZINC (CATALYTIC) (BY SIMILARITY).
BY SIMILARITY.
ZINC (CATALYTIC) (BY SIMILARITY).
INTERCHAIN (PROBABLE).
R -> G (IN REF. 2).
C -> S (IN REF. 2).
R -> A (IN REF. 2).
I -> L (IN REF. 2).
F -> LQ (IN REF. 2).
R -> N (IN REF. 2).
Z MM; D9FCEZ6DDA041EB4 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           17 FUNFTVSFWLRVP-----KVSASHLEGPSLHWSY 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ovis aries (Sheep).

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Bammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
Bovidae; Caprinee; Ovis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-DEC-1998 (Rel. 37, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Lutelnizing hormone-releasing hormone I) (Gonadotropin-releasing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Burgus R., Butcher M., Amoss M., Ling N., Monahan M., Rivier J., Fellows R., Blackwell R., Vale W., Guillemin R.; "Primary structure of the ovine hypothalamic luteinizing hormone-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1; Length 1250;
                                                                                                   Neurotoxin; Transmembrane; Hydrolase; Metalloprotease; Zinc.
NIII_MET 0 0 0 CHAIN NEUROMONTAL TANNAM NEUROM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
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Pred. No. 26;
9; Mismatches
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                 Pfam; PF01742; Peptidase_M27; 1.
PRINTS; PR00760; BONTOXILYSIN.
ProDom; PD001963; Bontoxilysin; 1.
PROSITE; PS00142; ZINC_PROTEASE; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -!- SUBCELLULAR LOCATION: Secreted
InterPro; IPR006025; Zn_MTpeptdse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=72094314; PubMed=4550508;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             143712 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          15-DEC-1998 (Rel. 37, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21.4%;
23.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STANDARD;
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339
772
963
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13; Conserv
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SEQUENCE OF 1-10.
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1194
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Q28588;
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GON1_SHEEP
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entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                             residues; Hormone; Amidation; Hypothalamus;
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                                                                                                                                                                                                                           GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                         ACTIVITY.
PYRROLIDONE CARBOXYLIC ACID.
AMIDATION (G-11 PROVIDE AMIDE GROUP).
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                                                                                                                                                                                                                                                                                                                                                          61;
                                                                                                                                                                                                                                                                                                                                                                                          Indels
                                                                                                                                                                                                                                                                                                                                                          Length
                                                                                                                                                                                                                                                                                                                          63962A1AE319B8F0 CRC64;
                                                                                                                                                                                              PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                        DB 1;
. 1.1;
                                                                                                                                                                                                                                                                                                                                                        Score 58; DB 1
Pred. No. 1.1;
0; Mismatches
                                                                                                                                                                                                            GONADOLIBERIN
                  or send an email to license@isb-sib.ch).
                                                            Interpro: IPR004019; GnRH.
Interpro: IPR004079; GonadoliberinI.
Pfam. PF00446; GRHH: 1.
PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH: 1.
Cleavage on pair of basic residues; Ho
Placenta; Pyrrolidone carboxylic acid.
                                                                                                                                                             Pyrrolidone carboxylic acid.
                                                                                                                                                                                                                                                                                                                                            21.2%; Sco-
100.0%; Pre
0;
                                                                                                                                                                                                                                                                                                                          6828 MW;
                                               EMBL; U02517; AAA03433.1;
                                                                                                                                                                                                                                                                                                                                                                                            Conservative
                                                                                                                                                                                           >61
10
>61
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Matches 9; Conserv
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ACT_SITE
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SEQUENCE
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CHAIN
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Search completed: September 24, 2003, 17:41:21 Job time : 9.37978 secs

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gene."
       entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                     1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-92174922; PubMed=1541280; Whelan S.M., Elmore M.J., Bodsworth N.J., Atkinson T., Minton N.P.; Whelan S.M., Elmore M.J., Bodsworth N.J., Atkinson T., Minton N.P.; "The complete amino acid sequence of the Clostridium botulinum type-E neurotoxin, derived by nucleotide-sequence analysis of the encoding
                                                                                                                                                                                                   PRINTS; PR01541; GONADOLIBRNI.
PR0SITE; PS00473; GNRH: 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus;
Placenta; Pharmaceutical; Signal; Polymorphism;
Pyrrolidone carboxylic acid.
                                                                                                      GO, GO:0005625; C:soluble fraction; TAS.
GO: GO:0005183; F:luteinizing hormone-releasing factor activity; TAS.
GO: GO:0007267; P:cell-cell signaling; TAS.
GO: GO:0007275; P:development; TAS.
GO: GO:0000285; P:negative regulation of cell proliferation; TAS.
GO: GO:0007165; P:signal transduction; TAS.
InterPro: IPR002012; GnH ...
InterPro: IPR004073; GonadoliberinI.
                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                           GONADOLIBERIN I.
GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Poulet S., Hauser D., Quanz M., Niemann H., Popoff M.R.; "Sequences of the botulinal neurotoxin E derived from Clostridium botulinum type E (strain Beluga) and Clostridium butyricum (strains ATCC 43181 and ATCC 43755).";
                                                                                                                                                                                                                                                                                                                            AMIDATION (G-34 PROVIDE AMIDE GROUP). W -> S (IN dbSNP:6185). /FTIG=VAR_013943.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
                                                                                                                                                                                                                                                                                                                                                                                                     ;
;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                01-JUL-1993 (Rel. 26, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Botulinum neurotoxin type E precursor (EC 3.4.24.69) (BONI/E)
                                                                                                                                                                                                                                                                                                                                                                                DB 1; Length 92;
                                                                                                                                                                                                                                                                                                                    PYRROLIDONE CARBOXYLIC ACID
                                                                                                                                                                                                                                                                                                                                                                                                    Indels
                                                                                                                                                                                                                                                                                                                                                           30A72221B076FA79 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Biochem. Biophys. Res. Commun. 183:107-113(1992).
                                                                                                                                                                                                                                                                 PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRT; 1250 AA.
                                                                                                                                                                                                                                                                                                                                                                                          Pred. No. 1.3;
3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                Score 59;
                                                                                                                                                                                                                                                                                                                                                                                                                      2 HWSYGLRPGS--SGPSLFNNF 20
                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=92181428; PubMed=1543481;
                                                       EMBL; M12578; AAA35916.1; -. EMBL; X15215; CAA33285.1; -.
                                            EMBL; X01059; CAA25526.1; -.
                                                                                                                                                                                                                                                                                                                                                           10380 MW;
                                                                                                                                                                                                                                                                                                                                                                               21.5%;
                                                                                                                                                                                                                                                                                                                                                                                         52.48;
                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity 52.4 tes 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STANDARD;
                                                                                      Genew; HGNC:4419; GNRH1.
                                                                                                                                                                                                                                                        2232
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                                                                                                                                                                                           Pfam; PF00446; GnRH;
                                                                            PIR; S05308; RHHUG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A. STRAIN-Beluga;
                                                                                                                                                                                                                                                                                                                                                            92 AA;
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000496:
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ACT_SITE
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MOD_RES
VARIANT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DEDITIFICATION OF SUBSTRATE.

MEDLINE=94124495; PubMed=8294407;

MEDLINE=94124495; PubMed=8294407;

MEDLINE=94124495; PubMed=8294407;

Jahn R., Niemann H.;

"Proteolysis of SNAP-25 by types E and A botulinal neurotoxins.";

J. Biol. Chem. 269:1617-1620(1994).

"PROTEON: BOTULINUS TOXIN ACTS BY INHIBITING NEUROTRANSMITTER

RELEASE. IT BINDS TO PERIPHERAL NEURONAL SYNAPSES, IS INTERNALIZED

AND MOVES BY RETROGRADE TRANSPORT UP THE AXON INTO THE SPINAL CORD

WHERE IT CAN MOVE BETWEEN POSTSYNAPTIC AND PRESYNAPTIC NEURONS. IT

INHIBITS NEUROTRANSMITTER RELEASE BY ACTING AS A ZINC

ENDOPEPTIDASE THAT CATALYZES THE HYDROLYSIS OF THE 180-ARG-)-ILE-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    181 BOND IN SNAP-25.
-!- CATALYTIC ACTIVITY: Limited hydrolysis of proteins of the neuroexocytosis apparatus, synaptobrevins, SNAP-25 or syntaxin. No detected action on small molecule substrates.
-!- COFACTOR: Binds 1 zinc ion per subunit (By similarity)
-!- SUBUNIT: DISOULIPEDE-LINKED HEFERODIMER OF A LICHT CHAIN (L) AND HEAVY CHAIN (H). THE LICHT CHAIN HAS THE PHARMACOLOGICAL ACTIVITY, WHILE THE N-AND C-TERMINAL OF THE HEAVY CHAIN MEDIATE CHANNEL FORMATION AND TOXIN BINDING, RESPECTIVELY.
                                                                                                        SEQUENCE OF 1-251 FROM N.A.
MEDLINE=90264400; PubMed=2160960;
Binz T., Kurazono H., Wille M., Frevert J., Wernars K., Niemann H.;
The complete sequence of botulinum neurotoxin type A and comparison with other clostidial neurotoxins.";
J. Biol. Chem. 265:9153-9158(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Schlavo G., Santtuci A., Dasgupta B.R., Mehta P.P., Jontes J., Benfenati F., Wilson M.C., Montecucco C.; "Botulinum neurotoxins serotypes A and E cleave SNAP-25 at distinct COOH-terminal peptide bonds."; FEBS Lett. 335:99-103(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 1-13.
MEDLINE-85197963; PubMed-3888113;
Schmidt J.J., Sathyamoorthy V., Dasgupta B.R.;
"Partial amino acid sequences of botulinum neurotoxins types B and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     MISCELLANEOUS: THERE ARE SEVEN ANTIGENICALLY DISTINCT FORMS OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 419-426.
MEDLINE=90344918; PubMed=2116911;
Gimenez J.A., Dasgupta B.R.;
"Botulinum neurotoxin type E fragmented with endoproteinase Lys-C reveals the site trypsin nicks and homology with tetanus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BOTULINUM NEUROTOXIN: TYPES A, B, C1, D, E, F, AND G. -!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY M27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Arch. Biochem. Biophys. 238:544-548(1985).
gene.";
Eur. J. Biochem. 204:657-667(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PIR; $21178; $21178.
HSSP, P10845; BBTA.
MERDES; M27.002; -
InterPro; IPR000395; Bontoxilysin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PubMed=8243676;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; X62089; CAA43999.1; -. EMBL; X62683; CAA44558.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     IDENTIFICATION OF SUBSTRATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Biochimie 72:213-217(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE-94063091;
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92 AA

PRT;

STANDARD;

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GON1_HUMAN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               between the Swiss Institute of Bioinformatics and the EMBL outstation—the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                               Neuroendocrinology 60:346-359(1994).
-1- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 AMIDATION (G-16 PROVIDE AMIDE GROUP) (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Hormone; Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                       Ma Y.J., Costa M.E., Ojeda S.R.; "Developmental expression of the genes encoding transforming growth factor alpha and its receptor in the hypothalamus of female rhesus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPEARS TO BE ESSENTIAL FOR BIOLOGICAL ACTIVITY (BY SIMILARITY).
PYRROLIDONE CARBOXYLIC ACID (BY
                                                  01-0CT-1996 (Rel. 34, Last Sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Lutelnizing hormone-releasing hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I]
                                                                                                                                                                      Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
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7
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Pred. No. 0.92;
3; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GNRH-ASSOCIATED PEPTIDE I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  505394DAA261A3F2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROGONADOLIBERIN I. GONADOLIBERIN I.
            67 AA.
                                                                                                                                                                                                                                                                                                                                                                                                        SUBCELLULAR LOCATION: Secreted.
SIMILARITY: Belongs to the GNRH family.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR002012; GNRH.
InterPro; IPR004079; GonadoliberinI.
Pfam; PF00446; GNRH; 1.
            PRT;
                                                                                                                                                                                                                                                           TISSUE-Hypothalamus;
MEDLINE-95124501; PubMed-7545971;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |||||||||||||||
HWSYGLRPGGKRDAENLMDSF 27
                                                                                                                                                           Macaca mulatta (Rhesus macaque).
                                       01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last seq
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; S75918; AAB33096.1; -. PIR; I78541; I78541.
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52.4%;
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            STANDARD;
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15
>67
                                                                                                                                         GNRH1 OR GNRH OR LHRH.
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Hes 11; Conserv
                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                67 AA;
                                                                                                                                                                                                                  NCBI_TaxID=9544;
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            MACMU
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PEPTIDE
ACT_SITE
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Matches
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RESULT 13 GON1_HUMAN

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                                                                                                                                                                                                                                                                                                          MEDLINE-89366682; PubMed-2671939;
Hayflick J.S., Adelman J.P., Seeburg P.H.;
"The complete nucleotide sequence of the human gonadotropin-releasing
                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-86094338; PubMed-2867548; AdeLina J.P., Mason A.J., Hayflick J.S., Seeburg P.H.; Adelina of the gene and hypothalamic cDNA for the common precursor of gonadotropin-releasing hormone and prolactin release-inhibiting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ERRATUM.
Cardill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N.,
Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L.,
Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.Q.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Reburg P.H., Adelman J.B.;
Seeburg P.H., Adelman J.B.;
"Characterization of cDNA for precursor of human luteinizing hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-99318093; PubMed=10391209; Cargill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N., Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L., Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.O.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Labs),
                              01-APR-1988 (Rel. 07, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing
hormone I) (GnRH I) (Luliberin I) (Gonadorelin); GnRH-associated
peptide I].
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Bukaryota: Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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Pharmaceuticals) and Relisorm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Tan L., Rousseau P.; "The chemical identity of the immunoreactive LHRH-like peptide "The chemical identity of placenta."; Inchemical in the human placenta."; Blochem. Blophys. Res. Commun. 109:1061-1071(1982).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NAT. Genet. 23:373-373(1999).
- PUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT ST.
THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Proc. Natl. Acad. Sci. U.S.A. 83:179-183(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A., AND VARIANT SER-16
                                                                                                                                                                                                                                                                                                                                                                     hormone gene.";
Nucleic Acids Res. 17:6403-6403(1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -!- SUBCELLULAR LOCATION: Secreted.
-!- PHARMACEUTICAL: Available under
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Lutrepulse or Lutrelef (Ferring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=83126573; PubMed=6760865;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Nat. Genet. 22:231-238(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nature 311:666-668(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           factor in human and rat.
                                                                                                                                                                       GNRH1 OR GNRH OR LHRH.
Homo sapiens (Human).
                                                                                                                                                                                                                                                                         [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                       NCBI_TaxID=9606;
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RESULT 11
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                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the Buropean Bioinformatics Institute. There are no restrictions on its use by non-profit institutions and a sits content is in no way modified and this statement is not removed. Usage by and for commercial
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                                                                                                                                                                                                                                                                                                                                                                       -!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
           Adelman J.P., Mason A.J., Hayflick J.S., Seeburg P.H.; "Isolation of the gene and hypothalamic cDNA for the common precursor of gonadotropin-releasing hormone and prolactin release-inhibiting factor in human and rat.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00446; GnRH; 1.
PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus;
Placenta; Signal; Pyrrolidone carboxylic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                    Adelman J.P., Bond C.T., Douglass J., Herbert E., Two mammalian genes transcribed from opposite strands of the same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROLACTIN RELEASE-INHIBITING FACTOR I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AMIDATION (G-34 PROVIDE AMIDE GROUP). 494B5C64DA8A3EB3 CRC64;
                                                                                                  MEDLINE-89384661; PubMed-2476669;
Bond C.T., Hayflick J.S., Seeburg P.H., Adelman J.P.;
"The rat gonadotropin-releasing hormone: SH locus: structure and
hypothalamic expression.";
                                                                                                                                                                                        TISSUE-Thymus;
MEDLINE=93105480; PubMed=1468115;
Maier C.C., Marchetti B., Leboeuf R.D., Blalock J.E.;
"Thymocytes express a mRNA that is identical to hypothalamic luteinizing hormone-releasing hormone mRNA.";
Cell. Mol. Neurobiol. 12:447-454(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           DB 1; Length 92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PYRROLIDONE CARBOXYLIC ACID
                                                                                                                                                                                                                                                                                                                                                                                                                             -1- TISSUE SPECIFICATION -1- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROGONADOLIBERIN I.
                                                   factor in human and rat.";
Proc. Natl. Acad. Sci. U.S.A. 83:179-183(1986).
                                                                                                                                                                                                                                                                                                                                                                                                            - SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        61.5; DB
No. 0.64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
                                                                                                                                                      Mol. Endocrinol. 3:1257-1262(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; M1670; AAA41264.1; -.
BMBL; M15527; AAA4244.1. ALT_SEQ.
EMBL; M15529; AAA4139.1; -.
EMBL; M15528; -; NOT_ANNOTATED_CDS.
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MEDLINE=86094338; PubMed=2867548;
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33
10500 MW;
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                                                                                                                                                                                                                                                                                                                                                            Science 235:1514-1517(1987).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         22.4%;
ilarity 51.7%;
Conservative
                                                                                                                                                                                                                                                                                  SEQUENCE OF 1-47 FROM N.A.
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Best Local Similarity
Matches 15; Conserv
                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                               SEQUENCE FROM N.A.
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SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STIMULATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus;
Placenta; Signal; Pyrrolidone carboxylic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AMIDATION (G-34 PROVIDE AMIDE GROUP) (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                       15-DEC-1998 (Rel. 37, Last sequence update)
15-DEC-1998 (Rel. 37, Last sequence update)
15-DEC-1098 (Rel. 41, Last annotation update)
Prognadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GONADOLIBERIN I)
                                                                                                                                                                                                              Tupaia glis belangeri (Common tree shrew).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Scandentia; Tupaiidae; Tupaia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Characterization of two new preproGnRH mRNAs in the tree shrew:
first direct evidence for mesencephalic GnRH gene expression in
                                                                                                                                                                                                                                                                                                                                                     TISSUE=Hypothalamus;
MEDLINE=97079639; PubMed=8921350;
Kasten T.L., White S.A., Norton T.T., Bond C.T., Adelman J.P.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         .;
?i
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gen. Comp. Endocrinol. 104:7-19(1996).
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT ST.
THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PYRROLIDONE CARBOXYLIC ACID (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4FDBF2C58CF5F63B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1;
0.97;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ignal; Pyrrolidone carboxylic acid. 23 BY SIMILARITY.
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  A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             -!- SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4; Mismatches
92
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |||||||||||||| : :| ::|
HWSYGLRPGGKRNAENLIDSF 45
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          21.9%;
52.4%;
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Best Local Similarity 52.4
Matches 11; Conservative
  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR004079; Gd
Pfam; PF00446; GnRH; 1
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                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                   NCBI_TaxID-9396;
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                                                                                                                                                                                        GNRH1 OR GNRH
                                                                                                                                                                                                                                                                                                                                                                                                                            Fernald R.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HORMONES
GON1_TUPGB
Q95335;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 25
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5

Gaps

7;

Indels

4;

Pred. No. 0.64 3; Mismatches

28 VPKVSAS-----HLEG-PSLHWSYGLRP 49

us-09-848-834a-18.rsp

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SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       East A.K., Bhandari M., Stacey J.M., Campbell K.D., Collins M.D.;
"Organization and phylogenetic interrelationships of genes encoding components of the botulinum toxin complex in proteolytic Clostridium botulinum types A. B. and F: evidence of chimeric sequences in the gene encoding the nontoxic nonhemagglutinin component.";
Int. J. Syst. Bacteriol. 46:1105-1112(1996).

-I- FUNCTON: Inhibits acetylcholine release. The botulinum toxin binds with high affinity to peripheral neuronal presynaptic membrane, is then internalized by receptor-mediated endocytosis. The C-terminus of the heavy chain (H) is responsible for the adherence of the toxin to the cell surface while the N-terminus mediates transport of the light chain from the endocytic vesicle
                                                                                                                                                                                                                                                                                                                                                                               Gaps
Williams C.F., Inoue T., Lucus A.-M., Zanotto P., Roy'P.;
"The complete sequence of four major structural proteins of African horse sickness virus serotype 6: evolutionary relationships within and between the orbiviruses.";
                                                      Virus Res. 53:53-73(1998).

-1- FUNCTION: THE VP2 PROTEIN IS ONE OF THE TWO PROTEINS (WITH VP5)
WHICH CONSTITUTE THE VIRUS PARTICLE OUTER CAPSID. IT IS THE
MAJOR TARGET OF THE HOST IMMUNOGENIC RESPONSE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   28-FBB-2003 (Rel. 41, Created)
28-FBB-2003 (Rel. 41, Last sequence update)
28-FBB-2003 (Rel. 41, Last annotation update)
Botulinum neurotoxin type A precursor (EC 3.4.24.69) (BoNT/A)
(Bontoxilysin A) (BOTOX) (Contains: Botulinum neurotoxin A, light-chain; Botulinum neurotoxin A, heavy-chain].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRAIN-Kyoto-F;
MIDLINE-94143603; PubMed-8310180;
Willems A., East A.K., Lawson P.A., Collins M.D.;
"Sequence of the gene coding for the neurotoxin of Clostridium botulinum type A associated with infant botulism: comparison with
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
                                                                                                                                                                                                                                                                                                                                                                               ö
                                                                                                                                                                                                                                                                                                                                               22.6%; Score 62; DB 1; Length 1051; 40.7%; Pred. No. 7.9;
                                                                                                                                                                                                                                                                                                                                                                             10; Indels
                                                                                                                                                                                                                                                                                                                    1051 AA; 122326 MW; 2B04DB9E389F4B5F CRC64;
                                                                                                               SIMILARITY: BELONGS TO THE REOVIRUSES VP2 FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PRT; 1295 AA
                                                                                                                                                                                                                                                                                                                                                                               6; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                          11 SSGPSLFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   other clostridial neurotoxins.";
Res. Microbiol. 144:547-556(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN=Kyoto-F;
MEDLINE=97016817; PubMed=8863443;
                                                                                                                                                                                                                                                          EMBL; AF021235; AAC40994.1; -.
InterPro; IPR001742; Orbi_VP2.
Pfam; PF00898; Orbi_VP2; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                [2]
SEQUENCE OF 1-65 FROM N.A.
                                                                                                                                                                                                                                                                                                                                               Query Match 22.6
Best Local Similarity 40.7
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            BOTA OR BNA OR ATX.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=1491;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Q45894; P77780;
                                                                                                                                                                                                                                                                                                        Coat protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Clostridium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CLOBO
                                                                                                                                                                                                                                                                                                                    SEQUENCE
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to the cytosol. After translocation, the light chain (L) whydrolyzes the 197-Gin-1-Arg-198 bond in SNAP-25, thereby blocking neurotransmitter release. Inhibition of acetylcholine release results in flaccid paralysis, with frequent heart or respiratory
                                                                                                                            R MEKUPE'S MAI. VOLZ;

R INTERPRO; IPR0000395; Bontoxilysin.

R InterPro; IPR0000395; Zn_MTpeptdse.

R Ffam; PF00142; Peptladse_MZ7; 1.

R PGam; PF00142; ZINC_PROTEASE; FALSE_NEG.

R PROSITE; PS00142; ZINC_PROTEASE; FALSE_NEG.

R NUT_MET 1 447 BOTULINUM NEUROTOXIN A, LIGHT-CHAIN.

T CHAIN 1295 BOTULINUM NEUROTOXIN A, LIGHT-CHAIN.

T CHAIN 1295 BOTULINUM NEUROTOXIN A, HEAVY-CHAIN.

T CHAIN 222 222 ZINC (CAPALYTIC) (BY SIMILARITY).

THE METAL 226 ZINC (CAPALYTIC) (BY SIMILARITY).

THE METAL 229 LS ZINC (CAPALYTIC) (BY SIMILARITY).

THE METAL 229 RS SIMILARITY.

THE METAL 229 RS SIMILARITY.
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  448 1295 BOTULINUM NEUROTOXIN A, HEAVY-
222 222 ZINC (CATALYTIC) (BY SIMILARITY
226 223 BY SIMILARITY: (BY SIMILARITY
226 226 ZINC (CATALYTIC) (BY SIMILARITY
429 453 INTERCHAIN (BY SIMILARITY).
1234 1279 BY SIMILARITY.
626 646 POTENTIAL.
655 675 POTENTIAL.
655 675 POTENTIAL.
1295 AA; 149279 MW; 5DA04A13D9BD6372 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; X73423; CAA51824.1; -.. EMBL; X87974; CAA61234.1; -.. PIN; 140645; 140645. MHSSP; P10045; 3BTA. MEROPS; M27.002...
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sest Local Similarity
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01-APR-1988
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MEDLINE-94038966; PubMed=7901002;
MEDLINE-94038966; PubMed=7901002;
MEDLINE-94038966; PubMed=7901002;
MEDLINE-94038966; PubMed=7901002;
T cleaving HPC-1/syntaxin.";
EMBO J. 12:4821-4828(1993).
IL EMBO J. 12:4821-4828(1993).
IN INDIATION ENOUTINUS TO PERIPERAL NEURONAL SYNAPSES, IS INTERNALIZED AND MOVES BY RETROGRADE TRANSPORT UP THE AXON INTO THE SPINAL CORD WHERE IT CAN MOVE BETWEEN POSTSYNAPTIC AND PRESYNAPTIC NEURONS. IT INHIBITS NEUROTRANSMITTER RELEASE BY ACTING AS A ZINC ENDOPERPTIDASE THAY CLEAVES SYNTAXIN.
IN INHIBITS NEUROTRANSMITTER RELEASE BY ACTING AS A ZINC ENDOPERPTIDASE THAY CLEAVES SYNTAXIN.
IN INHIBITS NEUROTRANSMITTER RELEASE BY ACTING AS A ZINC ENDOPERPTIDASE THAY CLEAVES SYNTAXIN.
IN INHIBITS NEUROTRANSMITTER RELEASE BY ACTING AS A ZINC ENDOPERPTIDASE THAY CLEAVES SYNTAXIN. SANDALS OF SYNTAXIN. NO detected action on small molecule substrates.

C -1- COFACTOR: Binds 1 zinc ion per subunit (By similarity).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Establishment of a monoclonal antibody recognizing an antigenic site common to Clostridium botulinum type B, Cl, D, and E toxins and
                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=90370487; PubMed=2204031;
Hauser D., Eklund M.W., Kurazona H., Binz T., Niemann H., Gill D.M.,
Boquet P., Popoff M.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Kimura K., Fujii N., Tsuzuki K., Murakami T., Indoh T.,
Yokosawa N., Takeshi K., Syuto B., Oguma K.;
The complete nucleotide sequence of the gene coding for botulinum
type CI toxin in the C-ST phage genome.",
Biochem. Biophys. Res. Commun. 171:1304-1311(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Isuzuki K., Yokosawa N., Syuto B., Ohishi I., Fujii N., Kimura K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-NOV-1990 (Rel. 16, Created)
01-NOV-1990 (Rel. 16, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Botulinum neurotoxin type C1 precursor (EC 3.4.24.69) (BONT/C1)
(Bontoxilysin C1).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Nucleotide sequence of Clostridium botulinum Cl neurotoxin."; Nucleic Acids Res. 18:4924-4924(1990).
    (CATALYTIC) (BY SIMILARITY).
                                                                                                                                                                                          DB 1; Length 1290;
                     INTERCHAIN (PROBABLE).
T -> M (IN REF. 4).
R -> G (IN REF. 2).
A -> S (IN REF. 2).
S -> R (IN REF. 4).
O MW; D21746E2C024DF43 CRC64;
                                                                                                                                                                                     23.0%; Score 63; DB 62.5%; Pred. No. 7.4; Live 5; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
STRAIN-Type C Stockholm / C-ST;
MEDLINE-91024998; PubMed-2222445;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 2-25.
STRAIN-Type C Stockholm / C-ST;
MEDLINE-88153072; PubMed=2450068;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       tetanus toxin.";
Infect. Immun. 56:898-902(1988).
                                                                                                                                                                                                                                                                                                              |:| :|:||||:|:||
SVFLDFSVSFWIRIPK 935
                                                                                                                                                                                                                                                                                    SLFNNFTVSFWLRVPK 30
                                                                                                                                            150670
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                                                                                                                                                                                                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                    STANDARD;
    233
445
29
217
224
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233 23
436
29 2
217 21
224 22
463 46
                                                                                                                                                                                        Query Match
Best Local Similarity
Matches 10; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NCBI_TaxID=1491;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clostridium
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P18640;
                                                                   CONFLICT
CONFLICT
CONFLICT
                                                                                                                                                                                                                                                                                    12
                        DISULFID
                                                                                                                                       SEQUENCE
                                                  CONFLICT
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  SOLUTION
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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SUBUNIT: DISULFIDE-LINKED HETERODIMER OF A LIGHT CHAIN (L) AND A HEAVY CHAIN (H). THE LIGHT CHAIN HAS THE PHARMACOLOGICAL ACTIVITY, WHILE THE N-AND C-TERMINAL OF THE HEAVY CHAIN MEDIATE CHANNEL FORMATION AND TOXIN BINDING, RESPECTIVELY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        African horse sickness virus 6 (AHSV-6) (African horse sickness virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
                                                                                                                             MISCELLANEOUS: THERE ARE SEVEN ANTIGENICALLY DISTINCT FORMS OF BOTULINUM NEUROTOXIN: TYPES A, B, C1, D, E, F, AND G.
MISCELLANEOUS: BOTULINUM TYPE C1 NEUROTOXIN IS SYNTHESIZED BY C STRAIN OF CLOSTRIDIUM BOTULINUM WHICH CARRY THE APPROPRIATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BOTULINUM NEUROTOXIN C1, LIGHT-CHAIN.
BOTULINUM NEUROTOXIN C1, HEAVY-CHAIN.
ZINC (CATALYTIC) (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ---SLFNNFTVSFWLRVPKVSASHLEGPSL-
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ZINC (CATALYTIC) (BY SIMILARITY).
INTERCHAIN (PROBABLE).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DB 1; Length 1290;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PR00760; BONTOXILYSIN.
PRODOM; PR001963; BONTOXILYSIN; 1.
PROSITE; PS00142; ZINC_PROTEASE; 1.
Neurotoxin; Transmembrane; Hydrolase; Metalloprotease; Zinc.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           84 P -> T (IN REF. 2).
148734 MW; 71FBE379F97129E8 CRC64;
                                                                                                                                                                                                                                                              SIMILARITY: BELONGS TO PEPTIDASE FAMILY M27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 15-DEC-1998 (Rel. 37, Last sequence update)
15-DEC-1998 (Rel. 37, Last annotation update)
Outer capsid protein VP2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Viruses; dsRNA viruses; Reoviridae; Orbivirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1051 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Match 22.8%; Score 62.5; Di Local Similarity 25.4%; Pred. No. 8.6; es 17; Conservative 13; Mismatches
                                                                                                     SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEROPS; M27.002; -.
InterPro; IPR000395; Bontoxilysin.
InterPro; IPR006025; Zn_MTpeptdse.
Pfam: PF01742; Peptidase_M27; 1.
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MEDLINE=98278331; Pubmed=9617769;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; X66433; CAA47060.1; -.
EMBL; X72793; CAA51313.1; -.
EMBL; X53751; CAA37780.1; -.
EMBL; D90210; BAA14235.1; -.
EMBL; X62389; CAA44263.1; -.
HSSP; P10845; 3BTA.
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                                                                                                                                                                                                                                          BACTERIOPHAGE
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071024;
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METAL
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CHAIN
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Partial amino acid sequences of botulinum neurotoxins types B
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ACT_SITE
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PDB;
PDB;
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 RANGE STANDARD BENEAU STANDARD BENEAU STANDARD S
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MEDLINE-94013372; PubMed-8408542;
MEDLINE-94013372; PubMed-8408542;
Campbell K., East A.K., Collins M.D.;
"Gene probes for identification of the botulinal neurotoxin gene and specific identification of neurotoxin types B, E, and F.";
                                                                                                                                                                                                                                                                                                                    Gaps
                           InterPro; IPR006025; Z_MTpeptdse.
Pfam: PF01742; Peptidsse_M27; 1.
Probom: PP001942; Bontoxilysin; 1.
PROSITE; PS00142; ZINC_PROFERSE; 1.
Neurotoxin; Transmembrane; Hydrolase; Metalloprotease; Zinc, CHAIN 1 436 BOTULINUM NEUROTOXIN F, LIGHT-CHAIN.
CHAIN 47 1274 ZINC (CATALXTIC) (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Whelan S.M., Elmore M.J., Bodsworth N.J., Brehm J.K., Atkinson T.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae; Clostridium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Molecular cloning of the Clostridium botulinum structural gene encoding the type B neurotoxin and determination of its entire nucleotide sequence.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Dasgupta B.R., Datta A.;
"Botulinum neurotoxin type B (strain 657): partial sequence and similarity with tetanus toxin.";
Biochimie 70:811-817(1988).
                                                                                                                                                                                                                                                                                                                    ö
                                                                                                                                                                                 BY SIMILARITY.
ZINC (CATALYTIC) (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          01-JUL-1993 (Rel. 26, Last sequence update)
15-SEP-2003 (Rel. 42, Last annotation update)
Botulinum neurotoxin type B precursor (EC 3.4.24.69) (BONT/B)
                                                                                                                                                                                                                                                                           Score 63; DB 1; Length 1274;
Pred. No. 7.3;
; Mismatches 2; Indels
                                                                                                                                                                                                                      INTERCHAIN (PROBABLE).
W; 5B99756A7438B921 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Szabo E.A., Pemberton J.M., Desmarchelier P.M.; Submitted (APR-1992) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Schmidt J.J., Sathyamoorthy V., Dasgupta B.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Appl. Environ. Microbiol. 58:2345-2354(1992)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Clin. Microbiol. 31:2255-2262(1993)
           InterPro; IPR000395; Bontoxilysin.
InterPro; IPR006025; Zn_MTpeptdse.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-89000987; PubMed-3139097;
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MEDLINE-85197963; PubMed-3888113;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-92384550; PubMed-1514783;
                                                                                                                                                                                                                                        146709 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BXB_CLOBO STANDARD; FP10844; P10844; P10843; Ol-JUL-1989 (Rel. 11, Created) Ol-JUL-1993 (Rel. 26, Last sequis-SEP-2003 (Rel. 42, Last annotation)
                                                                                                                                                                                                                                                                                                                                                                        | : ||::|||:||
928 SRYQNFSISFWVRIPK 943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 633-993 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 1-16 AND 441-458.
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                                                                                                                                                                                                                                                                             23.0%;
56.2%;
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                                                                                                                                                                                                                                                                                                                                                     15 SLFNNFTVSFWLRVPK
                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                          1274
227
228
228
231
445
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Best Local Similarity
9; Conserve
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MEROPS; M27.002;
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227
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231
429
1274
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Minton N.P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRAIN=657
                                                                                                                                                                               ACT_SITE
METAL
DISULFID
                                                                                                                                                                                                                                        SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BXB_CLOBO
                                                                                                                                                                                                                                                                                                                                                                                                                                                 RESULT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  L
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                                                                                                                                                                                                                                                                                                                                                                                                                                 by protectlyic cleavage of synaptobrevin."

Nature 359:832-835(1992).

-!- FUNCTION: BOTULINUS TOXIN ACTS BY INHIBITING NEUROTRANSMITTER

RELEASE. IT BINDS TO PERFIPHERAL NEURONAL SYNAPSES, IS INTERNALIZED

AND MOVES BY RETROGRADE TRANSPORT UP THE AXON INTO THE SPINAL CORD

WHERE IT CAN MOVE BETWEEN POSTSYNAPTIC AND PRESYNAPTIC NEURONS. IT

INHIBITS NEUROTRANSMITTER RELEASE BY ACTING AS A ZINC

ENDOPEPTIDASE THAT CLEAVES THE 76-GLN-|-PHE-77 BOND OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -!- CATALYTIC ACTIVITY: Limited hydrolysis of proteins of the neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. No detected action on small molecule substrates.
-!- COFACTOR: Binds 1 zinc ion per subunit (By similarity).
-!- SUBUNIT: DISULFIDE-LINEED HETERODIMER OF A LIGHT CHAIN (L) AND A HEAVY CHAIN (H). THE LIGHT CHAIN HAS THE PHARMACOLOGICAL ACTIVITY, WHILE THE N-ND C-TERMINAL OF THE HEAVY CHAIN MEDIATE CHANNEL FORMATION AND TOXIN BINDING, RESPECTIVELY.
-!- SUBCELLULAR LOCATION: Sceneted.
-!- MISCELLANEOUS: THERE ARE SEVEN ANTIGENICALLY DISTINCT FORMS OF BOTULINUM NEUROTOXIN: TYPES A, B, Cl, D, E, F, AND G.
                                                                                                                                                                                                                                                               IDENTIFICATION OF SUBSTRATE.
MEDIJUE-93063293; PubMed=1331807;
Schlavo G., Benfenati F., Poulain B., Rossetto O., de Laureto P.P.,
Dasgupta B.R., Montecucco C.;
"Tetanus and botulinum-B neurotoxins block neurotransmitter release
                                                                                                                                   Schiavo G., Rossetto O., Santucci A., Dasgupta B.R., Montecucco C.; "Botulinum neurotoxins are zinc proteins."; J. Biol. Chem. 267:23479-23483(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BOTULINUM NEUROTOXIN B, LIGHT-CHAIN.
BOTULINUM NEUROTOXIN B, HEAVY-CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ZINC (CATALYTIC) (BY SIMILARITY).
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ProDom; PD001963; Bontoxilysin; 1.
PROSITE; PS00142; ZINC_PROTEASE; 1.
Neurotoxin; Transmembrane; Hydrolase; Metalloprotease; Zinc;
Arch. Biochem. Biophys. 238:544-548(1985)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IPR000395; Bontoxilysin. IPR006025; Zn_MTpeptdse.
                                                                   IDENTIFICATION AS ZINC-PROTEASE.
MEDLINE=93054694; PubMed=1429690;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pfam; PF01742; Peptidase_M27; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRINTS; PR00760; BONTOXILYSIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; M81186; AAA23211.1; -.
EMBL; Z11934; CAA77991.1; -.
EMBL; X70817; CAA50148.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           440
1290
229
230
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1G9D; 13-NOV-02.
1IIE; 21-NOV-01.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16-AUG-00.
06-DEC-00.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1F31; 01-NOV-00.
1F82; 16-AUG-00.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1FQH; 06-DEC-00
1G9A; 13-NOV-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1EPW; 01-NOV-00
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SYNAPTOBREVIN-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A48940; A48940.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEROPS; M27.002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           3D-structure.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              1F83;
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SEQUENCE OF 1-64 FROM N.A.
                                                                SEQUENCE FROM N.A.
                                           NCBI_TaxID=1491;
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                                                                                                                                                                                                                                                                                        -1- FUNCTION: Plays an important role in the de novo pathway of purine
                                                                                                                                                                                                                               Rankin S., Li Z., Isberg R.R.; "Macrophage induced genes of Legionella pneumophila: protection from reactive intermediates and solute imbalance during intracellular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                 nucleotide biosynthesis.
-1- CATALYTIC ACTIVITY: GTP + IMP + L-aspartate = GDP + phosphate +
                                                                                                                                                                                                                                                                                                                                -1- PATHWAY: AMP biosynthesis; first committed step.
                                                                                               28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Adenylosuccinate synthetase (EC 6.3.4.4) (IMP--aspartate ligase)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ó
                                                                                                                                                                         Bacteria; Proteobacteria; Gammaproteobacteria; Legionellales;
Legionellaceae; Legionella.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           01-JUL-1993 (Rel. 26, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Botulinum neurotoxin type F precursor (EC 3.4.24.69) (BONT/F)
(Bontoxilysin F).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  23.0%; Score 63; DB 1; Length 431;
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                                                                                                                                                                                                                                                                            Submitted (JAN-2002) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             D446C19AED550774 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            168 YHNFVLTQYFKQPAVDLESLLGESLQWAEELRP 200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PROSITE; PS01266; ADENVLOSUCCIN_SYN_1; 1. PROSITE; PS00513; ADENVLOSUCCIN_SYN_2; 1. Purine biosynthesis; Ligase; GTP-binding. NP_BIND 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17 FNNFTVSFWLRVPKVSASHLEGPSLHWSYGLRP 49
                                                                           431 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BY SIMILARITY BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             InterPro; _IPR001114; Asucc_synthtase. Pfam, PF00709; Adenylsucc_synt; 1. ProDom; PD001188; Asucc_synthtase; 1. TIGRPAMS; TIGR00184; purA; 1.
                                                                            PRT;
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HAMAP; MF_00011; -; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            47381 MW;
           |:: ||: ||:||
935 SMYENFSTSFWIRIPK 950
15 SLFNNFTVSFWLRVPK 30
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                                                                            STANDARD;
                                                                                                                                                                  Legionella pneumophila.
                                                                                                                                                                                                                                                                                                                        adenylosuccinate.
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                                                                                                                                             (AdSS) (AMPSase).
                                                                                                                                                                                                 NCBI_TaxID-446;
                                                                            PURA_LEGPN
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P30996:
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ACT_SITE
SEQUENCE
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                                                               PURA_LEGPN
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Matches
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Occidentidium Doublinum

Constriction

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Matches
    SOUTH THE TERMENT 
                                                                                                                                                                                                                                   Dasgupta B.R., Foley J., Niece R.; "Partial sequence of the light chain of botulinum neurotoxin type A."; Biochemistry 26:4162-4162(1987).
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FUNCTION: Inhibits acetylcholine release. The botulinum toxin binds with high affinity to peripheral neuronal presynaptic membrane, is then internalized by receptor-mediated endocytosis. The C-terminus of the heavy chain (H) is responsible for the adherence of the toxin to the cell surface while the N-terminus mediates transport of the light chain from the endocytic vesicle to the cytosol. After translocation, the light chain (L) hydrolyzes the 197-Gln-|-Arg-198 bond in SNAP-25, thereby blocking
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Binz T., Blasi J., Yamasaki S., Baumeister A., Link E., Suedhof T.C., Jahn R., Niemann H.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIINE-85285016; PubMed-3896784; Shone C.C., Hambleton P., Melling J.; Inactivation of Clostridium botulinum type A neurotoxin by trypsin and purification of two tryptic fragments. Proteolytic action near the COOH terminus of the heavy subunit destroys toxin-binding
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MEDLINE=94063091; PubMed=8243676; Schlavo G., Santtuci A., Dasgupta B.R., Mehta P.P., Jontes J., Benfenati F., Wilson M.C., Montecucco C.; Bottunian neurotoxins serotypes A and E cleave SNAP-25 at distinct COOH-terminal peptide bonds."; FEBS Lett, 335:99-103(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-89024662; PubMed-3178218; Sathymoorthy V., Dasgupta B.R., Foley J., Niece R.L.; Sathymoorthy V., Dasgupta B.R., Foley J., Niece R.L.; "Botulinum neurotoxin type A: cleavage of the heavy chain into two halves and their partial sequences."; Arch. Biochem. Biophys. 266:142-151(1988).
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MEDLINE-98455071; PubMed-9783750;
Lacy D.B., Tepp W., Cohen A.C., Dasgupta B.R., Stevens R.C.;
"Crystal structure of botulinum neurotoxin type A and implications
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      E and A botulinal neurotoxins.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MUTAGENESIS OF GLU-261; PHE-265 AND TYR-365.
MEDLINE-21556941; PubMed=11700044;
Rigoni M., Caccin P., Johnson E.A., Montecucco C., Rossetto O.
"Site-directed mutagenesis identifies active-site residues of
                                                                                        Schmidt J.J., Sartymoorthy V., Dasgupta B.R.; "Partial amino acid sequence of the heavy and light chains of botulinum neurotoxin type A.";
                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 1-5 AND 444-456.
MEDLINE-91120847; PubMed-2126206;
Dasgupta B.R., Dekleva M.L.;
"Botulinum neurotoxin type A: sequence of amino acids at the N-terminus and around the nicking site.";
Biochimie 72:661-664(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       light chain of botulinum neurotoxin type a.";
Biochem. Biophys. Res. Commun. 288:1231-1237(2001).
                                                                                                                                                              Biochem. Biophys. Res. Commun. 119:900-904(1984)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Proteolysis of SNAP-25 by types E
J. Biol. Chem. 269:1617-1620(1994).
                                            SEQUENCE OF 1-16.
MEDLINE=84178501; Pubmed=6370252;
Schmidt J.J., Sartymoorthy V., Da
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        IDENTIFICATION OF SUBSTRATE.
MEDLINE-94124495; PubMed-8294407;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Eur. J. Biochem. 151:75-82(1985).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 448-464 AND 872-895
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 IDENTIFICATION OF SUBSTRATE.
FEBS Lett. 376:41-44(1995)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE OF 448-482
                                                                                                                                                                                                             SEQUENCE OF 1-46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       toxicity.
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                                                                                                      SNAP25 or syntaxin. No
                results in flaccid paralysis, with frequent heart or respiratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            F->A: DECREASE IN ENZYMATIC ACTIVITY.
Y->A: DECREASE IN ENZYMATIC ACTIVITY.
neurotransmitter release. Inhibition of acetylcholine release
                                                                                                                                                                                                                                                                                                                                                          WWW="http://www.botox.com/index.jsp?hp&productinfo".
DATABASE: NAME=Protein SpotLight;
NOTE-Issue 19 of February 2002;
WWW="http://www.expasy.org/spotlight/articles/sptlt019.html".
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LIGHT-CHAIN.
HEAVY-CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            E->A: DRASTIC DECREASE IN ENZYMATIC
                                                      CATALYTIC ACTIVITY: Limited hydrolysis of proteins of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ProDom; PD001963; Bontoxilysin; 1.
PROSITE; PS00142; ZINC_PROTEASE; 1.
Neurotoxin; Transmembrane; Hydrolase; Metalloprotease; Zinc;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1; Length 1295;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              BOTULINUM NEUROTOXIN
BOTULINUM NEUROTOXIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                P -> Q (IN REF. 1).
E -> P (IN REF. 9).
T -> L (IN REF. 8).
S -> K (IN REF. 8).
                                                                          neuroexocytosis apparatus, synaptobrevins, SN
detected action on small molecule substrates.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ZINC (CATALYTIC).
ZINC (CATALYTIC).
INTERCHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZINC (CATALYTIC)
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Pred. No. 4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEROPS; M27.002; ...
InterPro; IPR000395; Bontoxilysin.
InterPro; IPR006025; Zn_MTpeptdse.
Pfam; PF01742; Peptidase. M27; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; X52066; CAA36289.1; -. EMBL; M30196; AAA23262.1; -. EMBL; X92973; CAA63551.1; -. EMBL; D67030; BAA11061.1; -. EMBL; M27892; AAA23269.1; -.
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56.28;
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PDB; 3BTA; 01-OCT-99.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-113 / 30;

MEDLINE-94092745; PubWed-8268233;

MEDLINE-94092745; PubWed-8268233;

MEDLINE-94092745; PubWed-8268233;

Mucleotide sequence of the gene coding for Clostridium botulinum
(Clostridium argentinense) type G neurotoxin: genealogical comparison
with other clostridial neurotoxins.";

1- FUNCTION: BOTULINUS TOXIN ACTS BY INHIBITING NEUROTRANSMITTER
RELEASE. IT BINDS TO PRIPHERAL NEURONAL SYNAPSES, IS INTERNALIZED
AND MOVES BY RETROGRADE TRANSPORT UP THE AXON INTO THE SPINAL CORD
WHERE IT CAN MOVE BETWEEN POSTSYNAPTIC AND PRESYNAPTIC NEURONS. IT
INHIBITS NEUROTRANSMITTER RELEASE BY ACTING AS A ZINC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -!- CATALTITIC ACTIVITY: Limited hydrolysis of proteins of the neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. No detected action on small molecule substrates.
-!- COFACTOR: Binds 1 zinc ion per subunit (By similarity).
-!- SUBUNIT: Disulfide-linked heterodimer of a light chain (L) and a heavy chain (H). The light chain has the pharmacological activity, while the N- and C-terminal of the heavy chain mediate channel formation and toxin binding, respectively.
-!- SUBCELLULAR LOCATION: Secreted (By similarity).
-!- SUBCELLULAR LOCATION: SEVER ANTIGENICALLY DISTINCT FORMS OF BOTULINUM NUBUROTOXIN: TYPES A, B, Cl. D, E, F, AND G.
                                                                      Gaps
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INIT_MET 0 0 BY SIMILARITY.
CHAIN 1 441 BOTULINUM NEUROTOXIN G, LIGHT-CHAIN.
CHAIN 442 1296 BOTULINUM NEUROTOXIN G, HEAVY-CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
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01-NOV-1997 (Rel. 35, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Botulinum neurotoxin type G precursor (EC 3.4.24.69) (BONT/G)
                 41.6%; Score 114; DB 1; Length 1314; 95.5%; Pred. No. 4e-06;
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0
                                             Pred. No. 4e-06;
1; Mismatches
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                                                                                                                                             ProDom; PD001963; Bontoxilysin; 1. PROSITE; PS00142; ZINC_PROTEASE; 1
                                                                                                                 16 LFNNFTVSFWLRVPKVSASHLE 37
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                                                                    Conservative
                                                                                                                                                                                                                                                                                        STANDARD;
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Matches 21; Conserv
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MEDLINE=96096783; PubMed=8521962;
Fujita R., Fujita R., Fujita R., Tovoe K., Nakajima H., Kumon H., Oguma K.;
"Molecular characterization of two forms of nontoxic-nonhemagalutinin components of Clostridium botulinum type A progenitor toxins.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Binz B., Kuarzono H., Wille M., Frevent J., Wernars K., Niemann H.; "The complete sequence of botulinum neurotoxin type A and comparison with other clostridial neurotoxins.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Thompson D.E., Brehm J.K., Oultram J.D., Swinfield T.-J., Shompson E.C., Aktinson T., Melling J., Minton N.P.; "The complete amino acid sequence of the Clostridium botulinum type neurotoxin, deduced by nucleotide sequence analysis of the encoding
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           BXAL_CLOBO STANDARD; PRT; 1295 AA.
101845; P01561; P18639;
01-JUL-1989 (Rel. 11, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
28-FEB-2003 (Rel. 41, Last annotation update)
(Bontulinum neurotoxin type A precursor (EC 3.4.24.69) (BONT/A)
(Bontoxilysin A) (BOTOX) (Contains: Botulinum neurotoxin A, light-chain; Botulinum neurotoxin A, light-
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  ZINC (CATALYTIC) (BY SIMILARITY).
                                                           ZINC (CATALYTIC) (BY SIMILARITY)
                                                                                                                                                                          Score 67; DB 1; Length 1296;
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                                                                                      INTERCHAIN (PROBABLE).
MW; DC8E47E15F665C31 CRC64;
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                                                                                                                                                                                                        Pred. No. 2.4;
                                                                                                                                                                                                                                10; Mismatches
                                BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                     949
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Biol. Chem. 265:9153-9158(1990)
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MEDLINE-90235864; PubMed-2185020;
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                                                                                                                                                                                                                                                                                                                             927 SMFDNFSINFWVRTPKYNNDIQ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=90264400; PubMed=2160960;
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39.1%;
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233
449
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BONTOXILYSIN

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  This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COFACTOR: Binds 1 zinc ion per subunit (By similarity).
SUBUNIT: THE PRECURSOR POLYPEPTIDE IS SUBSEQUENTLY CLEAVED TO
SUBUNIT: THE PRECURSOR POLYPEPTIDE IS SUBSEQUENTLY CLEAVED TO
YIELD SUBCHAINS L AND H. THESE REMAIN LINKED BY A DISULFIDE BRIDGE
AND ARE NON-TOXIC AFTER SEPARATION.
MISCELLANEOUS: THE C-TERMINAL OF THE HEAVY CHAIN BINDS TO
GANGLIOSIDE RECEPTORS.
SIMILARITY: BELONGS TO PEPTIDASE FAMILY M27.
                                                                                                                                                                                                                                                                                                                                                    NAT. STRUCE. BIOJ. 4:788-792(1997).
-!- FUNCTION: TETANUS TOXIN ACTS BY INHIBITING NEUROTRANSMITTER
-!- FUNCTION: TETANUS TOXIN ACTS BY INHIBITING NEURONEL SYNAPSES, IS INTERNALIZED
AND MOVES BY RETROGRADE TRANSPORT UP THE AXON INTO THE SPINAL CORD
WHERE IT CAN MOVE BETWEEN POSTSYNAPTIC AND PRESYNAPTIC NEURONS. IT
                                                                                                                                                                                                                                                                                                                                                                                                              INHIBITS NEUROTRANSMITTER RELEASE BY ACTING AS A ZINC
ENDOPEPTIDASE THAT CATALYZES THE HYDROLYSIS OF THE 76-GLN-|-PHE-77
                                                                                                                                                                                                                                                                                   X-RAY CRYSTALLOGRAPHY (2.7 ANGSTROMS) OF 874-1314.
MEDLINE-97475217; PubMed-9334741;
Umland T.C., Wingert L.M., Swaminathan S., Furey W.F., Schmidt J.J.,
                                                                                                                                                                                         IDENTIFICATION OF SUBSTRATE.
MEDLINE-93063293; PubMed-1331807;
Schlavo G., Benfenati F., Poulain B., Rossetto O., de Laureto P.P.,
Dasgupta B.R., Montecucco C.;
"Tetanus and botulinum-B neurotoxins block neurotransmitter release
                                                                                                                                   Montecucco C.; "Tetanus toxin is a zinc protein and its inhibition of neurotransmitter release and protease activity depend on zinc.";
                                            Kriegistein K.G., Henschen A.H., Weller U., Habermann E.;
"Limited proteolysis of tetanus toxin. Relation to activity and
identification of cleavage sites.";
Eur. J. Biochem. 202:41-51(1991).
                                                                                                                                                                                                                                                                                                                                                                                                                                               CATALYTIC ACTIVITY: Hydrolysis of 76-Gln-|-Phe-77 bond in
                                                                                                                                                                                                                                                                                                                                'Structure of the receptor binding fragment HC of tetanus
                                                                                                                           Schiavo G., Poulain B., Rossetto O., Benfenati F., Tauc
                                                                                                                                                                                                                                                by proteclytic cleavage of synaptobrevin.";
Nature 359:832-835(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         InterPro; IPR000395; Bontoxilysin.
InterPro; IPR006025; Zn_MTpeptdse.
Pfam; PF01742; Peptidase_M27; 1.
                      PARTIAL SEQUENCE.
MEDLINE-92037649; PubMed=1935979;
                                                                                                    IDENTIFICATION AS ZINC-PROTEASE.
MEDLINE=93010948; Pubmed=1396558;
Eur. J. Biochem. 188:39-45(1990)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; X04436; CAA28033.1; -.
EMBL; X06214; CAA29564.1; -.
EMBL; AF528097; AAA33454.1; -.
EMBL; M12739; AAA33282.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                      BOND OF SYNAPTOBREVIN-2
                                                                                                                                                                     EMBO J. 11:3577-3583(1992).
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24-MAR-00.
24-MAR-00.
24-MAR-00.
05-SEP-01.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            synaptobrevin 2.
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                                                                                                                                                                                                                                                                                                                                             neurotoxin.";
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EMBL; M12739;
PIR; A25689;
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PDB; 1DLL;
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PDB; 1DFQ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1A8D;
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| Processing | Pro
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Q01886 cochliobolu P37041 alligator m P73627 synechocyst P47651 mycoplasma P23671 clostridium Q9ial0 dicentrarch Q01811 impatiens n Q05098 pseudomonas P46081 clostridium O73812 morone saxa P25472 clostridium P70074 pagrus majo

HTS1_COCCA
GON1_ALLM1
YH70_SYNY3
PSTA_MYCGE
AMY_CLOAB
GON1_DICLA
VNSS_INSVN
PFEA_PSEAE
BXCN_CLOBO
GON1_MORSA
GUND_CLOCE
GON1_PAGMA

5217 100 585 654 760 760 7449 746 11196 584 584

1109.7 1109.3 1109.3 1109.3 1109.5 1109.5 1109.5

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September 24, 2003, 17:00:31; Search time 9.27978 Seconds (without alignments) 253.383 Million cell updates/sec
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274
1 XHWSYGLRPGSSGPSLFNNF.....VSASHLEGPSLHWSYGLRPX 50
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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                                                                                                                                                                                                                                                                                                                                                                    127863 seqs, 47026705 residues
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Maximum Match 100%
Listing first 45 summaries
                                                                                 OM protein - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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Perfect score:
Sequence:
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                                                                                                                              on:
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Description	P04958 clostridium	P10845 clostridium	Q8rnm2 legionella			P18640 clostridium			Q95335 tupaia glis	пасаса		_	-	_		mns			Q9np58 homo sapien	-							Q9y512 homo sapien	Q03073 bradyrhizob	P17855 staphylococ	005	Q61493 mus musculu
SUMMARIES	TETX_CLOTE	BXA1_CLOBO	PURA_LEGPN	BXF_CLOBO	BXB_CLOBO	BXC1_CLOBO	BXA2 CLOBO	GON1_RAT	GON1_TUPGB		GON1_HUMAN	BXE_CLOBO	GON1_SHEEP	GON1_MESAU	GON1_XENLA	GON1_MOUSE	GON1_PIG	COA2_SV40	ABC6_HUMAN	GON1_HAPBU	SYK_BRUME	SYK_BRUSU	STC1_STAAU	BXE_CLOBU	GON1_CHICK	AMPM_MYCCA	CG51_HUMAN	FIXN_BRAJA	STC2_STAAU	VNSS_TSWV1	DPOZ_MOUSE
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RESULT 1 TETX_CLOTE TO TEXT_CLOTE TO TETX_CLOTE TO TETX_CLOTE

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Job time : 18.59 secs
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C. Species: Clostridium botulinum (fragment)
C. Species: Clostridium botulinum
C. Species: Clostridium botulinum
C. Species: Clostridium botulinum
C. Accession: S48110
R. Campbell, K. D.; Collins, M. D.; East, A. K.
J. Clin. Microbiol. 31, 2255-2262, 1993
A. Tile: Gene probes for identification of the botulinal neurotoxin gene and specific id A; Reference number: S48110
A; Accession: S48110
A; Accession: S48110
A; Status: preliminary; translation not shown
A; Molecule type: DNA
A; Residues: 1-366 < CAM>A; Residues: 1-366 < CAM>A; Residues: Letences: EMBL: X70821; NID: 9407792; PIDN: CAA50152.1; PID: 9407793
C; Superfamily: tetanus toxin
C; Keywords: neurotoxin
F;37-92/Product: prolactin release-inhibiting factor #status predicted <PIF>
F;24/Modified site: pyrrolidone carboxylic acid (Gln) (in mature form) #status predicted
F;33/Modified site: amidated carboxyl end (Gly) (amide in mature form from following gly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          probable transmembrane protein - Streptomyces coelicolor
C; Species: Streptomyces coelicolor
C; Species: Streptomyces coelicolor
C; Date: 03-Dec-1999 #text_change 18-Aug-2000
C; Accession: T3659
R; Oliver, K.; Harris, D.; James, K.D.; Parkhill, J.; Barrell, B.G.; Rajandream, M.A.
Submitted to the EMBL Data Library, May 1999
A; Reference number: 221575
A; Accession: T36589
A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Mesidues: 1-502 < Coll>
A; Cross-references: EMBL: ALO49826; PIDN: CAB42730.1; GSPDB: GN00070; SCOEDB: SCH24.24
A; Escidues: 1-502 < Coll>
A; Cross-references: strain A3(2)
C; Genetics:
A; 
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                                                                                                                                                                             Query Match 22.4%; Score 61.5; DB 1; Length 92; Best Local Similarity 51.7%; Pred. No. 1; Matches 15; Conservative 3; Mismatches 4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 61; DB 2; Length 366;
Pred. No. 5.6;
5; Mismatches 1; Indels
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Pred. No. 8;
7; Mismatches 21; Indels
                                                                                                                                                                                                                                                                                                                                                 28 VPKVSAS-----HLEG-PSLHWSYGLRP 49
                                                                                                                                                                                                                                                                                                                                                                                                             :||: |: || | | || || || || || || 4 IPKLMAAVVLLTVCLEGCSSQHWSYGLRP 32
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Best Local Similarity 57.1%;
Matches 8; Conservative
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Local Similarity 24.1%;
hes 19; Conservative
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297 YQNFSISFWVRIPK 310
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Search completed: September 24, 2003, 17:49:36

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medaka-type gonadotropin-releasing hormone precursor - Japanese medaka
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                                                                                                                                                                                                                                                                                                                                            A; Accession: JC7393
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                                                                                                                                                                                                                                                                                                 A; Contents: Brain
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Best Local S
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A; Residues: 1-669, R', 671-1291 <TS1>
B; Tsuzuk; K.; Kimura, K.; Fujii, N.; Vokosawa, N.; Oguma, K.
B; Diamori Control Con
   A;Cross-references: EMBL:X53751:
R;Kimura, K.; Fujii, N.; Tsuzuki, K.; Murakami, T.; Indoh, T.; Yokosawa, N.; Takeshi, K.
Biochem. Biophys. Res. Commun. 171, 1304-1311, 1990
A;Title: The complete nucleotide sequence of the gene coding for botulinum type C-1 toxi
A;Reference number: A35396; MUID:91024998; PMID:2222445
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C; Species: 12-Aug-1996 #sequence_revision 12-Aug-1996 #text_change 16-Jul-1999
C; Date: 12-Aug-1996 #sequence_revision 12-Aug-1996 #text_change 16-Jul-1999
C; Accession: 146645, A.K.; Lawson, P.A.; Collins, M.D.
R; Willems, A.; East, A.K.; Lawson, P.A.; Collins, M.D.
Rses. Microbiol, 144, 547-556, 1993
A; Tille: Sequence of the gene coding for the neurotoxin of Clostridium botulinum type A; Reference number: 140645, MUID:94143603; PMID:8310180
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C;Superfamily: tetanus toxin
C;Keywords: neurotoxin
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                                                                                                                                                                                                                                                           A; Status: preliminary; not compared with conceptual translation
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Pred. No. 18;
6; Mismatches 2
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A; Status: preliminary; translated from GB/EMBL/DDBJ
A; Molecule type: DNA
A; Residues: 1-1296 <RES>
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; Pred. No. 15;
13; Mismatches
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9
A; Residues: 1-84,'P',86-1291 <HAU>
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50.0%;
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936 SMYENFSTSFWIKIPK 951
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A.Status: preliminary
A.Molecule type: DNA
A.Residues: 1-607 < 7783-
A.Cross-references: GB:D90210
C.Superfamily: tetanus toxin
C.Keywords: neurotoxin
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Best Local Similarity
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RESULT 12 JC7393

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C;Species: Oryzias latipes (Japanése medaka)
C;Date: 17-Nov-2000 #sequence_revision 17-Nov-2000 #text_change 20-Jan-2003
C;Accession: JC7393
R;Okubo, K.; Amano, M.; Yoshiura, Y.; Suetake, H.; Aida, K.
Biochem. Biophys. Res. Commun. 276, 228-303, 2000
A;Title: A novel form of gonadotropin-releasing hormone in the medaka, Oryzias lat_pe A;Reference number: JC7393
                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: mRNA
A; Residues: 1-91 <OKU>
A; Cross-references: DDBJ:AB041333
C; Comment: This protein plays the roles as a hypophysiotropic factor, and a physio_og
C; Genetics:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 N'Alternate names: gonadoliberin-associated protein (GAP); gonadotropin releasing PDT) N'Alternate names: gonadoliberin-associated protein (GAP); gonadotropin releasing PDT) N'Contains: gonadoliberin; prolactin release-inhibiting factor C; Species: Rattus norvegicus (Norway rat) Pactors: Rattus norvegicus (Norway rat) C; Date: 31-Mar-1988 #sequence_revision 31-Mar-1988 #text_change 18-Jun-1999 C; Accession: A40147; B26173; A48410 R; Bond, C.T.; Hayflick, J.S.; Seeburg, P.H.; Adelman, J.P. Mol. Endocrinol. 3, 1257-1262, 1989 A; Title: The rat gonadotropin-releasing hormone: SH locus: structure and hypothalamic A; Reference number: A40147; MUID:89384661; PMID:2476669
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A; Residues: 1-92 <BON>
A; References: Gene and A; Hayfilck, J.S.; Seeburg, P.H.

B; Adelman, J.P.; Mason, A.J.; Hayfilck, J.S.; Seeburg, P.H.
B; Reference number: A94090; MUID:86094338; PMID:2867548
A; Reference number: A94090; MUID:86094338; PMID:2867548
A; Residues type: mRNA
A; Residues: 1-92 <BONA
A; Residues: 1-92 A; Residues: A14445
A; Residues: A14454
A; Residues: A14454
A; Reference number: A48410; MUID:93105480; PMID:1468115
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A;Note: gonadoliberin-associated protein may have prolactin release inhibiting acti 11
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C; Keywords: amidated carboxyl end: hormone; hypothalamus; placenta; pyroglutamic ac.dl
F;1-23/Domain: signal sequence #status predicted <SIG>
F;24-92/Product: progonadoliberin #status predicted <GGN>
F;24-33/Product: gonadoliberin #status predicted <GLN>
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A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-92 < MAI>
A;Cross-references: GB:S50870; NID:g262059; PIDN:AAB24572.1; PID:g262060
A;Experimental source: thymus
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Pred. No. 0.99;
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32.7%;
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C;Superfamily: gonadoliberin
C;Keywords: brain
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Gaps

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R;Schiavo, G.; Benfenati, F.; Poulain, B.; Rossetto, O.; de Laureto, P.P.; DasGupta, Nature 359, 832-835, 1992
A;Title: Tetanus and botulinum-B neurotoxins block neurotransmitter release by proteo A;Title: Tetanus and botulinum-B neurotoxins block neurotransmitter release by proteo A;Contents: annotation
C;Comment: Botulinum neurotoxins inhibit neurotransmitter release from cholinergic sy C;Genettics:
A;Genetics:
A;Genetics:
A;Genetics:
A;Genetics:
A;Genetics:
A;Genetics:
A;Genetics:
B;Furction:
C;Superfamily: tetanus toxin
C;Superfamily: tetanus toxin
C;Reywords: hydrolase; metalloproteinase; neurotoxin; transmembrane protein; zinc
F;2-441/Prodduct: bontoxilysin B light chain #status experimental <LGHTV>
F;230,234/Bhinding site: zinc (His) #status predicted
F;231/Active site: Glu #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N;Alternate names: BoNT/Cl protein
C;Species: Clostridium botulinum phage 1C
A;Variety: strain C 468
C;Date: 19-Mar-1997 **sequence_revision 06-Jun-1997 **text_change 16-Jul-1999
C;Accession: S46431; S49107
R;Hauser, D; Eklund, M.W.; Boquet, P.; Popoff, M.R.
Mol. Gen. Genet. 243, 631-640, 1994
A;Title: Organization of the botulinum neurotoxin Cl gene and its associated non-toxin A;Reference number: S46431
A;Accession: S46431
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botulinum neurotoxin type Cl precursor - Clostridium botulinum (type C, strain c-st)
C;Species: Clostridium botulinum.
C;Species: Clostridium botulinum.
C;Date: 10-Mar-1994 #sequence_revision 07-Apr-1994 #text_change 17-Mar-2003
C;Accession: S11291; A35396; S22166; A49777
R;Hauser, D.; Bklund, M.W.; Kurazono, H.; Binz, T.; Niemann, H.; Gill, D.M.; Boquet, Nucleic Acids Res. 18, 4924, 1990
A;Title: Nucleotide sequence of Clostridium botulinum Cl neurotoxin.
A;Reference number: S11291; MUID:90370487; PMID:2204031
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A;Experimental source: strain C 468
A;Note: the nucleotide sequence was submitted to the EMBL Data Library, May 1993
C;Superfamily: tetanus toxin
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13;
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; Pred. No. 15;
13; Mismatches
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Pred. No. 3
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62.5%; Pred
5;
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921 SVFLDFSVSFWIRIPK 936
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25.4%;
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Best Local Similarity 25.44
Matches 17; Conservative
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Matches 10; Conservative
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966 SGWSIGI 972
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A; Residues: 1-1291 <HAU>
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A; Status: preliminary
A; Molecule type: DNA
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A; Residues: 1-369 <CAM>
A; Residues: 1-369 <CAM>
A; Cross-references: EMBL:X70820; NID:g407790; PIDN:CAAS0151.1; PID:g407791
A; Cross-references: Equence was submitted to the EMBL Data Library, January 1998
C; Superfamily: tetanus toxin
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C.Species: Clostridium botulinum
C.Date: 16-Aug-1996 #sequence_revision 16-Aug-1996 #text_change 16-Jul-1999
C.Accession: 140813; S48108
R.East, A.K.; Ritchardson, P.T.; Allaway, D.; Collins, M.D.; Roberts, T.A.; Thompson
FEMS Microbiol. Lett. 96, 225-230, 1992
A;Title: Sequence of the gene encoding type F neurotoxin of Clostridium botulinum.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ricampbell, K.D.; Collins, M.D.; East, A.K.
J. Clin. Microbiol. 31, 2255-2262, 1993
Arritle: Gene probes for identification of the botulinal neurotoxin gene and sakeference number: $48103; MUID:94013372; PMID:8408542
A; Accession: $48109
A; Status: preliminary; nucleic acid sequence not shown; translation not shown
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C.Species: 12-Feb-1998 #sequence_revision 20-Feb-1998 #text_change 16-Jul-1999
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A; Residues: 634-1002 <CAM>
A; Cross-references: EMBL:X70816; NID:g407788; PIDN:CAA50147.1; PID:g407789
C; Superfamily: tetanus toxin
C; Keywords: neurotoxin
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                                                                             Length 1291;
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A; Cross-references: GB:M92906; NID:g144866; PIDN:AAA23263
R; Campbell, K.D.; Collins, M.D.; Esst, A.K.
J. Clin. Microbiol. 31, 2255-2262, 1993
A; Title: Gene probes for identification of the botulinal A; Reference number: S48103; MUID:94013372; PMID:8408542
A; Accession: S48108
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              neurotoxin type F - Clostridium botulinum (fragment)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A;Accession: 140813
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 63; DB 2;
Pred. No. 3.2;
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Pred. No. 13;
5; Mismatches
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                                                                         23.4%; Score 64; 62.5%; Pred. No. 9
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F;231/Active site: Glu #status predicted
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2
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921 SMFLDFSVSFWIRIPK 936
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SRYQNFSISFWVRIPK 943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                295 SRYONFSISFWVRIPK 310
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56.2%;
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56.2%;
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                                                                                                                                                       Conservative
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                                                                                                      Best Local Similarity
Matches 10; Conserv
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                                                                             Query Match
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C; Species: Clostridium botulinum
C; Date: 12-Aug-1996 #sequence_revision 12-Aug-1996 #text_change 16-Jul-1999
C; Date: 12-Aug-1996 #sequence_revision 12-Aug-1996 #text_change 16-Jul-1999
C; Accession: 140631; 848104; 836015
R; Hutson, R.A.; Collins, M.D.; East, A.K.; Thompson, D.E.
Curr. Microbiol. 28, 101-110, 1994
A; Title: Nucleotide sequence of the gene coding for non-proteolytic Clostridium botulinu
A; Reference number: 140631; MUID:94122659; PMID:7764370
A; Accession: 140631
A; Residues: 1-1291 <RES>
A; Rocassion: 1-1291 <RES>
A; Rompbell, K.D.; Collins; M.D.; East, A.K.
J; Clin. Microbiol. 31, 2255-2262, 1993
A; Title: Gene probes for identification of the botulinal neurotoxin gene and specific id
A; Reference number: $48103; MUID:94013372; PMID:8408842
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A;Cross-treferences: EMBL:X70814; NID:940778; PIDN:CAA50145.1; PID:9407779
A;Accession: S48104
A;Accession: S48104
A;Status: preliminary
A;Molecule type: DNA A;Status: preliminary
A;Molecule type: DNA A;Status: preliminary
A;Molecule type: DNA A;Status: DNB-COMMOLECULE type: DNA A;Status: preliminary
A;Molecule type: DNA A;Status: DNB-COMMOLECULE type: DNA A;Status: preliminary
A;Molecule type: DNA A;Status: DNB-COMMOLECULE type: DNA A;Status: DNB-COMMOLECULE type: DNA A;Status: DNB-COMMOLECULE type: DNA A;Cross-treferences: EMBL:X70819; NID:9407780; PIDN:CAA50150.1; PID:9407781
A;Experimental source: non-proteolytic strain Eklund 2B (Colworth 229)
C;Comment: Botulinum neurotoxin; transmembrane protein; zinc C;Genetics: metalloprotein; neurotoxin; transmembrane protein; zinc C;Genetics: metalloprotein; neurotoxin; transmembrane protein; zinc C;Genetics: metalloprotein; neurotoxin; transmembrane protein; zinc C;Genetics: botulinum neurotoxin; type B light chain #status predicted <HVY>F;230,234/Binding site: zinc (His) #status predicted
                                                                                                                                                                                                                                                                                                                                  C;Species: Clostidium barati C;Species: C;Species: C;Species: C;Species: S3411; S31860 C;Species: S3411; S31860 C;Species: S3411; S31860 C;Species: S3411; S31860 C;Species: S3411; MUD:: Species: S3411; MUD:: Species: S3411; MUD:: S325228; PMID:: S486245 C;Species: S33411 S;Species: S33411 S;Species: S33411 S;Species: S33411 S;Species: S33411 S;Species: S33411 S;Species: Species: Species
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Pred. No. 9.6;
4; Mismatches
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936 SMYENFSTSFWIRIPK 951
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62.5%;
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Best Local Similarity 62.5
Matches 10; Conservative
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A; Molecule type: DNA
A; Residues: 1, 0, 3-26, V, 28-1296 <THO>
A; Molecule type: DNA
A; Residues: 1, 0, 3-26, V, 28-1296 <THO>
A; Cross-references: EMBL: X52066; NID:940381; PIDN:CAA36289.1; PID:940382
A; Experimental source: NCTC 2916
B; Fujita, R.; Fujinaga, Y.; Inoue, R.; Nakajima, H.; Kumon, H.; Oguma, R.
FEBS Lett. 376, 41-44, 1995
A; Title: Molecular characterization of two forms of nontoxic-nonhemagglutinin compone
A; Reference number: S67988; MUID:96096783; PMID:851962
A; Status: prellminary
A; Molecule type: DNA
A; Readues: 1-12 <FUJ
A; Residues: 1-12 <FUJ
A; Cross-references: EMBL:D67030; DDBJ:D50421; NID:92160224
B; Betley, M.J.; Somers, E.; DasGupta, B.R.
B; Betley, M.J.; Somers, E.; DasGupta, B.R.
B; Biochem: Biophys; Res: Commun. 162, 1888-1395, 1989
B; Title: Characterization of botulinum type A neurotoxin gene: delineation of the N-t
A; Reference number: A33401; MUID:89350959; PMID:2669749
A; Molecular type: Number: A3401; MUID:89350959; PMID:2669749
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                                                                                                                                                                      A;Title: The complete amino acid sequence of the Clostridium botulinum type A neuroto A;Reference number: $09492; MUID:90235864; PMID:2185020 A;Accession: $09492
                        A;Cross-references: GB:M30196; NID:g144864; PIDN:AAA23262.1; PID:g144865
A;Experimental source: strain 62A, subtype A
R;Thompson, D.E.; Brehm, J.K.; Oultram, J.D.; Swinfield, T.J.; Shone, C.C.; Atkinson,
Eur. J. Biochem. 189, 73-81, 1990
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A; Wolecule type: protein
A; Wesdiucs; 2-47 (2052)
B; Binz, T; Blasi, J; Yamasaki, S; Baumeister, A.; Link, E.; Suedhof, T.C.; Jahn,
J. Biol. Chem. 269, 1617-1620, 1994
A; Title: Proteolysis of SNAP-25 by types E and A botulinal neurotoxins.
A; Reference number: A49708; MUID:94124495; PMID:8294407
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A;Cross-references: GB:M27892; NID:g144880; PIDN:AAA23269.1; PID:g551776
R;GImenez, J.A.; DasGupta, B.R.
J. Protein Chem. 12, 351-363, 1993
A;Title: Botulinum type A neurotoxin digested with pepsin yields 132, 97, 72, A;Reference number: A53884; MUID:94000342; PMID:8397793
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A; Residues: 2-6;445-453, YX',455-457 < DAS1>
R; DasGupta, B.R.; Foley, J.; Niece, R.
Biochemistry 26, 4162, 1987 .
A; Title: Partial sequence of the light chain of botulinum neurotoxin type A.
A; Reference number: A27000
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A;Residues: 867-880;1148-1217,'Y',1219
A;Experimental source: strain Hall
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A; Residues: 1-35 <BET>
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A; Status: preliminary
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                                                                                                                                                                                  A.Molecule type: protein
A.Residues: 2-31 <DEF>
C.Comment: The source of this protein was an extrachromosomal plasmid.
C.Comment: The source of this protein was an extrachromosomal plasmid.
C.Comment: The precursor is cleaved by endogenous proteinase activity to form light (fradual chains are not toxic when separated). The amino end of the heavy chain (fragment B) C.Comment: Fragment B forms ion channels in a lipid bilayer. Fragment C binds to ganglic C.Comment: This potent neurotoxin binds to peripheral neuronal synapses, is internalized presynaptic neurons. It inhibits neurotransmitter release by proteclytic cleavage of sy C.Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         C.Fonotion:
A.Description: blocks neuroexocytosis via hydrolysis of a Gln-Phe peptide bond in synapt
C.Superfamily: tetanus toxin
C.Superfamily: tetanus toxin
C.Superfamily: tetanus toxin
C.Superfamily: tetanus predicted <TL>
F.2-457/Product: tentoxylysin light chain (fragment A) #status predicted <TL>
F.461-1315/Product: tentoxylysin heavy chain (fragment B.C) #status experimental <TTH>
F.461-1315/Product: tentoxylysin heavy chain (fragment B.C) #status experimental <TTH>
F.865-1315/Domain: channel forming (fragment B) #status predicted <TXC>
F.865-1315/Domain: ganglioside binding (fragment C) #status predicted <TXC>
F.234/Active site: Glu #status predicted
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C;Species: Clostridium botulinum
C;Species: Clostridium botulinum
C;Date: 07-Oct-1994 #sequence_revision 01-Dec-1995 #text_change 16-Jul-1999
C;Accession: S39791
R;Campbell, K.; Collins, M.D.; East, A.K.
Biochim. Biophys. Acta 1216, 487-491, 1993
A;Ittle: Nucleotide sequence of the gene coding for Clostridium botulinum (Clostridium & A;Reference number: S39791; MUID:94092745; PMID:8268233
A;Recession: S39791
A;Recession: S39791
A;Recession: Lipy A;Molecule type: DNA
A;Residues: 1-1297
A;Molecule type: DNA
A;Residues: 1-1297
CCAM>
A;Cross-references: EMBL:X74162; NID:9441275; PIDN:CAA52275.1; PID:9441276
C;Superfamily: tetanus toxin
C;Reywords: neurotoxin
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N.Alternate names: botulinum neurotoxin type A
N.Alternate names: botulinum neurotoxin type A
N.Alternate. 31-War-1993 #sequence_revision 31-War-1993 #text_change 18-Jun-1999
C;Accession: A35294; S09492; S68220; A33401; A53884; A60025; A27000
R;Blnz, T.; Kurazono, H.; Wille, M.; Frevert, J.; Wernars, K.; Niemann, H.
J. Biol. Chem. 265, 9153-9158, 1990
A;Title: The complete sequence of botulinum neurotoxin type A and comparison with other
Ride Filippis, V.; Vangelista, L.; Schiavo, G.; Tonello, F.; Montecucco, C. Bur. J. Bacchem. 229, 61-69, 1995
Affitle: Structural studies on the zinc-endopeptidase light chain of tetanus neurotoxin. A;Reference number: S69348; MUID:95262688; PMID:7744050
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Pred. No. 5.3e-06;
1; Mismatches 0; Indels
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10; Mismatches
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Best Local Similarity 39.1r
Conservative
9, Conservative
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les 21; Conservative
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A; Description: catalyzes hydrolysis of an Asn-Arg peptide bond in synaptosomal-associ C; Superfamily: tetanus toxin C; Superfamily: tetanus toxin C; Keywords: disulfide bond; hydrolase; metalloproteinase; neurotoxin; transmembrane p F; 2-444/Product: bontoxilysin A light chain #status experimental <LGHT> F; 445-1296/Product: bontoxilysin A heavy of hain #status experimental <HVY> F; 223, 227/Binding site: zinc (His) #status predicted
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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OM protein - protein search, using sw model

September 24, 2003, 17:30:06; Search time 17.59 Seconds Run on:

(without alignments)
273.361 Million cell updates/sec

US-09-848-834A-18 274

1 XHWSYGLRPGSSGPSLFNNF.....VSASHLEGPSLHWSYGLRPX 50 Title: Perfect score: Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283308 seqs, 96168682 residues Searched:

283308 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

PIR_76:* Database

pir1:* pir2:* pir3:* pir4:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	sin (EC	-	bontoxilysin (EC 3	botulinum neurotox	non-proteolytic bo	neurotoxin type F	neurotoxin type F	bontoxilysin (EC 3	botulinum neurotox	botulinum neurotox	botulinum neurotox	medaka-type gonado	gonadoliberin prec	neurotoxin type F	probable transmemb	botulinum neurotox	hypothetical prote	gonadoliberin prec			1		gonadoliberin prec	coat protein VP2 -	ATP-binding casset	hypothetical prote	•	hypothetical 345 p	ype E
SUMMARIES	1																										•			
SUM	ei ei	BTCLTN	S39791	BTCLAB	S33411	I40631	S48109	I40813	A48940	S46431	A49777	I40645	JC7393	RHRTG	S48110	T36589	S70582	AB2018	I78541	RHHUG	RHPGG	RHSHG	I51423	RHMSG	WWP24	JE0248	H83403	150739	A58519	S48106
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dР	Query	Ξ.	24.5	23.7	23.4	23.4	23.0	23.0	23.0	22.8	22.8	22.6	22.4	22.4	22.3	22.3	21.7	21.7	21.5	21.5	21.2	21.2	21.2	21.2	21.0	21.0	20.8	20.6	20.6	20.6
	Score	114	29	65	64	64	63	63	63	62.5	62.5	62	61.5	61.5	61		59.5	59.5	29	29	28	28	28	28	57.5	57.5		56.5	9	9
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hypothetical prote	lysine-tRNA ligase	staphylocoagulase	botulinum neurotox	botulinum neurotox	gonadoliberin I pr	probable methionyl	hypothetical prote	cytochrome-c oxida	staphylocoagulase	staphylocoagulase	probable myb-like	nonstructural prot	DNA-directed DNA p	HC-toxin synthetas	gonadoliberin I -
T24077	AC3572	S06744	JH0256	S21178	I50644	548593	T01618	A47468	A89786	A41511	T38197	MNVUWC	T17202	A45086	RHAQ1
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444	551	658	1251	1252	92	141	812	549	658	715	496	464	3122	5232	10
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56.5	56.5	56.5	56.5	56.5	26	26	26	55.5	55.5	55.5	55	54.5	54.5	54.5	54
30	31	32	33	34	35	36	37	38	39	40	41	. 42	43	44	45

ALIGNMENTS

 RESULT 1 BICLIN tentoxilysin (EC 3.4.24.68) precursor - Clostridium tetani N'Allernate manes: tetanus neurotoxin C'Spacies - Clostridium tetani
 C; Date: 31. Mar-1988 #sequence_revision 31.Mar-1988 #text_change 03-Jun-2002 C; Accession: A25689; A25757; A25194; B25194; A60759; S69348; S09364 R; Eisel, U.; Jarausch, W.; Goretzki, K.; Henschen, A.; Engels, J.; Weller, U.; Hudel,
A;Title: Tetanus toxin: primary structure, expression in E. coli, and homology witH b A;Reference number: A25689; MUID:87053814; PMID:3536478 A;Accession: A55689 A;Molecule type: DNA
A; Residues: 1-1315 <els> A; Cross-references: GB:X04436; NID:940769; PIDN:CAA28033.1; PID:940770 R; Fairweather, N.F.; Lyness, V.A. Nucleic Acids Res. 14, 7809-7812, 1986 A:Title: The complete nucleotide sequence of tetanus toxin</els>
A; Reference number: A25757; MUID:87040747; PMID:3774547 A; Accession: A25757 A; Molecule type: DNA
A; Crostques: 1-1313 CEALA A; Cross references: GB: XX06214; NID:940773; PIDN:CAA29564.1; PID:940774 A: Transfamental source: grain CA3911
R;Fairweather, N.F.; Lyness, V.A.; Pickard, D.J.; Allen, G.; Thomson, R.O. J. Bacteriol. 165, 21-27, 1986
 A;Title: Cloning, nucleotide sequencing, and expression of tetanus toxin fragment Ci. A;Reference number: A25194; MUID:86085672; PMID:3510187
A; Molecule type: DNA A; Residues: 743-1315 <fa2> A; Cross-references: GB:M12739; NID:g144920; PIDN:AAA23282.1; PID:g144921</fa2>
 otein <fr3> Susimato N. Omitanimi V. Obabo</fr3>
 <pre>Rivatbuda, w.; Let, D.L.; Sugimoto, N.; Cautsumit, N.; Orabe, T. Infect. Immun. 57, 3588-3593, 1989 A;Title: Isolation, purification, and characterization of fragment B, the NH-2-termin, A;Reference number: A60759; MUID:90035436; PMID:2478476</pre>
 R;Demotz, S.; Lanzavecchia, L.; Eisel, U.; Niemann, H.; Widmann, C.; Corradin, G. J. Immunol. 142, 394-402, 1989 A;Title: Delineation of several DR-restricted tetanus toxin T cell epitopes. A;Reference number: JS0098; MUID:89093918; PMID:2463305
A;Contents: annotation; epitope region R;Schiavo, G.; Benfenati, F.; Poulain, B.; Rossetto, O.; de Laureto, P.P.; DasGupta_ Nature 359, 832-835, 1992
 A;Title: Tetanus and botulinum-b neurotoxins block neurotransmitter release by protion A;Reference number: S27125; MUID:93063293; PMID:1331807 A;Contents: annotation

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Pujinaga Y., Oguma K., Ohyama T.; Role of C-Terminal Region of HA-33 Component of Botulinum Toxin in
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Actinopterygii; Teleostei; Euteleostei; Neoteleostei;

Acatthomorpha; Acanthopterygii; Percomorpha; Atherinomorpha;

Beloniformes; Adrianichthyidae; Oryziinae; Oryzias.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Okubo K., Mitani H., Naruse K., Kondo M., Shima A., Tanaka M., Asakawa S., Shimizu N., Yoshiura Y., Aida K.; Structural characterization of GnRH loci in the medaka genome."; Structural characterization of GnRH loci in the medaka genome."; EMBL; AB074499; BAC06421.1; -. EMBL; AB074499; BAC06421.1; -. FinterPro; PF0446; GnRH; I. PROSITE; PS004473; GnRH; I. SEQUENCE 91 AA; 10293 MW; BCD32BF97A8A027B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 HWSYGLRPGSSGPSLFNNFTVSFWLRV----PKVSASHLEGPSLHWSYGLR 48
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                                                                                                                                                                                 DB 2; Length 1291;
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01-MAR-2001 (TrEMBLrel. 16, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Prepro-gonadotropin-releasing hormone.
MDGNRH OR MFGNRH.
                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation update)
                                                                                                                                                                                 22.8%; Score 62.5; DB 2; 1
25.4%; Pred. No. 29;
iive 13; Mismatches 12;
                                         Commun. 288:650-657(2001).
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                                      Biochem. Biophys. Res. Commun. 288:6
EMBL; AB061780; BAB17149.1; -.
Interpro; IPR000395; Bontoxilysin.
Interpro; IPR006025; Zn. WTpeptdse.
Pfam; PF01742; Peptidase_M27; 1.
PRINTS; PR00766; BONTOXILYSIN.
PRODOM; PD001963; BONTOXILYSIN.
PROSITE; PS00142; ZINC_PROTEASE; 1.
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01-0CT-2002 (TrEMBLrel. 22, Last seq
01-MAR-2003 (TrEMBLrel. 23, Last ann
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Best Local Similarity 25.4
Matches 17; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                PRELIMINARY;
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                          Hemagglutination.";
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08J107;
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Okubo K., Amano M., Yoshiura Y., Suetake H., Aida K., "A Novel Form of Gonadotropin-Releasing Hormone in the Medaka, Oryzias
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Oryzias latipes (Medaka fish) (Japanese ricefish).
Eukaryota: Metazoa; Chordata; Craniata: Vertebrata; Euteleostomi;
Actinopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Atherinomorpha;
Beloniformes; Adrianichthyidae; Oryzilnae; Oryzias.
                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-22133319; PubMed-12137956; Outbo K., Mitanl H., Naruse K., Kondo M., Shima A., Tanaka M., Asakawa S., Shimizu N., Yoshiura Y., Aida K.; "Structural characterization of GnRH loci in the medaka genome.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 HWSYGLRPGSSGPSLFNNFTVSFWLRV-----PKVSASHLEGPSLHWSYGLR 48
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A00F2BED6FD6E0B5 CRC64;
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                                                                                                                                                                                                                                          MEDLINE-20462954; PubMed-11006121;
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EMBL, AB041336; BAC06419.1; -.
Interpro; IPR002012; GRRH.
Pfam; PF00446; GRRH; 1.
PROSITE; PS00473; GNRH; 1.
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SEQUENCE FROM N.A.
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SEQUENCE FROM N.A.
                                                                                                                                    NCBI_TaxID=8090;
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Clostridium botulinum.
       Query Match
Best Local Similarity
Matches 10; Conserv
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                                                                                                                                                                                                              Plasmid SCP1
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Clostridium botulinum.
Bacteria: Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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Ihara H., Kohda T., Morimoto F., Tsukamoto K., Karasawa T.,
Nakamura S., Mukamoto M., Kozaki S.;
"Clostridium botulinum type B neurotoxin associated with infant
                                                                                                                                                                                                                                                                      Hutson R.A., Collins M.D., East A.K., Thompson D.E.;
Nucleotide sequence of the gene coding for non-proteolytic
Clostridium botulinum type B neurotoxin: comparison with other
clostridial neurotoxins.";
Curr. Microbiol. 28:101-110(1994).
EMBL: X71343; CAAS0482.1;
HSSP: P10845; 3BTA.
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 Length 1291;
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Pfam; PF01742; Peptidase_MZ7; 1.
PRINTS; PR00760; BONTOXILYSIN.
PRODOM: PD001963; BONTOXILYSIN.
PROSTTE: PS00142; ZINC_PROTEASE; 1.
SEGUENCE 1291 AA: 150513 MW; 71BCAFE23D69FAAA CRC64;
                      1; Indels
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EMBL; AB084152; BAC22064.1; -.
SEQUENCE 1291 AA; 150574 MW; 0227CAEF4F58504D CRC64;
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23.4%; Score 64; DB 62.5%; Pred. No. 18;
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Pred. No. 18;
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STRAIN-EKlund 17B ATCC25765;
MEDLINE-94122659; PubMed=7764370;
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921 SMFLDFSVSFWIRIPK 936
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921 SMFLDFSVSFWIRIPK 936
                                        15 SLFNNFTVSFWLRVPK 30
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62.5%;
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                    Conservative
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                                                                                                                 PRELIMINARY;
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01-NOV-1996 (TrEMBLrel.
01-MAR-2003 (TrEMBLrel.
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Best Local Similarity
Matches 10; Conserva
           Similarity
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Query Match
Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Complete genome sequence of the model actinomycete Streptomyces
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MEDLINE-21534265; PubMed-11676492;
Sagane Y., Kouguchi H., Watanabe T., Sunagawa H., Inoue K.,
  Length 1291;
                                                   Indels
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                                                                                                                                                                                                                                                                                                                       01-JUN-2001 (TrEMBLrel. 17, Created)
01-JUN-2001 (TrEMBLrel. 17, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Putative large secreted protein.
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Last annotation update)
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NCBI_TaxID=1902;
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DB
18;
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Pred. No.
  Score 64;
Pred. No.
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Nature 417.141-147(2002).
EMBL, AAL590464, CAC36800.1; -.
InterPro; IPR006530; YD.
TIGRFAMS; TIGR01643; YD_repeat_2x; 11.
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921 SMFLDFSVSFWIRIPK 936
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23.4%;
62.5%;
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SEQUENCE 2082 AA; 22441
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Best Local Similarity 44.2
Matches 19; Conservative
                                                Conservative
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01-DEC-2001 (TrEMBLrel.
01-MAR-2003 (TrEMBLrel.
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Best Local Similarity 62.5
Matches 10; Conservative
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NCBI_TaxID=1491;
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                                                                                        Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae; Clostridium.
                                                                                                                                     SEQUENCE FROM N.A.
MEDLINE-9325228; PubMed-8486245;
Thompson D.E., Hutson R.A., East A.K., Allaway D., Collins M.D.,
Richardson P.T.;
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
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Pred. No. 18;
5; Mismatches 1; Indels
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InterPro; IPR006025; Zn_MTpeptdse.
Pfam; PF01742; Peptidase_M27; 1.
ProDom; PD01963; Bontoxilysin; 1.
PROSITE; PS00142; ZINC_PROTEASE; 1.
SEQUENCE 1268 AA; 1145513 MW; 963040091AC15ED2 CRC64;
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Probom; PD001963; Bontox1Jysin; 1.
PROSITE; PRO10142; ZINC_PROTEASE; 1.
SEQUENCE 1291 AA; 150840 MW; E4D3B0E46AB2E735 CRC64;
                             01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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01-WAY-1999 (TrEMBLrel. 10, Last sequence update)
01-WAR-2003 (TrEMBLrel. 23, Last annotation update)
            PRT; 1268 AA.
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HSSP; P10845; 3BTA.
InterPro; IPR000395; Bontoxilysin.
InterPro; IPR006025; Zn_MTpeptdse.
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STRAIN-CDC 3281;
MEDLINE-98440323; PubMed-9767710;
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| 920 SRYONFSVSFWVRIPK 935
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Best Local Similarity 62.5%;
Matches 10; Conservative
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nes 10; Conservative
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                                                                                  Clostridium baratii
                                                               Neurotoxin type F.
                                                                                                                NCBI_TaxID=1561;
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SEQUENCE FROM N.A.

KITMEN N. FERTEIRA J.L., Baumstark B.R.;

A KITMEN N. FERTEIRA J.L., Baumstark B.R.;

Tondracterization of six-type A strains of Clostridium botulinum that contain type B toxin gene sequences.";

Submitted (ANG-2000) to the EMBL/GenBank/DDBJ databases.

REMBL, AF300466; AAL11498.1;

InterPro; IPR006035; Zn.MTpeptdse.

RICEPTO; IPR006035; Zn.MTpeptdse.

Pfam; PF01742; Peptidase_M27; 1.

REMBL; PR00760; BONTOXILYSIN.

PRODOM; PR001963; Bontoxilysin; 1.

PRODOM; PR001963; Bontoxilysin; 1.

PROSITE; PS00142; ZINC_PROTEASE; 1.
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"Characterization of six type A strains of Clostridium botulinum that contain type B toxin gene sequences.";
Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases.
EMBL, AF295926; AAK97132.1;
InterPro; IPR000395; Bontoxilysin.
InterPro; IPR006025; Zn_MTpeptdse.
Pfam; PF01742; Peptidase_M27; 1.
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
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ProDom; PD001963; BONTOXILYSIN. 1.
PROSITE; PS00142; ZINC_PROTEASE; 1.
SEQUENCE 1291 AA; I50824 MW; D7CA07BAE2EBBCD2 CRC64;
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SEQUENCE 1291 AA; 150843 MW; 7AC1737B0FA5A151 CRC64;
                                                                                                                                                                                                                                                                                01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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62.5%; Pred. No. 18;
ive 5; Mismatches
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921 SMFLDFSVSFWIRIPK 936
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921 SMFLDFSVSFWIRIPK 936
15 SLFNNFTVSFWLRVPK 30
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Conservative
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 PRELIMINARY;
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                                                         Clostridium botulinum
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361 AA;
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Matches 10; Conserv
                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                     Clostridium.
NCBI_TaxID=1491;
                                                                                                           STRAIN-type B;
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"Gene probes for identification of the botulinal neurotoxin gene and specific identification of neurotoxin types B, E, and F.";
J. Clin. Microbiol. 31:2255-2262(1993).
HSSP; P10845; 3BTA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
              Tetanus toxin (Fragment).
Clostridium tetani.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae; Clostridium
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
Clostridium.
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                                                                                                                                                                                                           Length 1310;
                                                            23.4%; Score 64; DB 2; Length 361; 62.5%; Pred. No. 4.3; Live 5; Mismatches 1; Indels
                                                                                                                                                                                                         Score 114; DB 2; Length 13
Pred. No. 6.1e-06;
1; Mismatches 0; Indels
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361 361
361 AA; 42131 MW; AZEOFFFC81F9533D CRC64;
01-DEC-2001 (TrEMBLrel. 19, Last sequence update) 01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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288 SMFLDFSVSFWIRIPK 303
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95.5%;
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01.NOV-1996 (TrEMBLrel. 01,
01-NOV-1996 (TrEMBLrel. 01,
01-OCT-2000 (TrEMBLrel. 15,
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                                               NCBI_TaxID=1513;
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"Gene probes for identification of the botulinal neurotoxin gene and specific identification of neurotoxin types B, E, and F.";
J. Clin. Microbiol. 31:2255-2262(1993).
HSSP; P10845; 3BTA.
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MEDLINE-99343691; PubMed-10413679;
Lalli G., Herreros J., Osborne S.L., Montecucco C., Rossetto O., Schiavo G.;
                                                                                                                                                               Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae; Clostridium. NCBI_TaxID=1491;
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Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
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441 AA; 52772 MW; 721D0B468E8C95A4 CRC64;
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Last annotation update)
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01-NOV-1999 (TrEMBLrel. 12, Last seq
01-DEC-2001 (TrEMBLrel. 19, Last anno
                                             Created)
PRT;
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7. Cell Sci. 112:2715-2724(1999).
EMBL; AJ242628; CAB43706.1; -.
HSSP; P10845; 3BTA.
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288 SMFLDFSVSFWIRIPK 303
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                                      01-NOV-1996 (TrEMBLrel. 01, 01-NOV-1996 (TrEMBLrel. 01, 01-OCT-2000 (TrEMBLrel. 15,
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RESULT

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September 24, 2003, 17:29:11; Search time 48.4765 Seconds (without alignments) 266.163 Million cell updates/sec
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274
1 XHWSYGLRPGSSGPSLFNNF.....VSASHLEGPSLHWSYGLRPX 50
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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Perfect score:
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sp_fung1:*
sp_human:*
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sp_unclassified:* sp_rvirus:*
sp_bacteriap:*
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sp_rodent:*
sp_virus:* SPTREMBL_23:* 55... 110... 111... 112... 114... 116... Database :

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	Q91a13 clostridium		Q45848 clostridium	Q45846 clostridium	Q9x708 clostridium	Q45851 clostridium	Q9zaj8 clostridium	Q93g71 clostridium	Q933k0 clostridium	Q08077 clostridium	Q8gr96 clostridium		Q93ht3 clostrid1um	Q8jiq7 oryzias lat	Q9dqc8 oryzias lat	Q9j2h3 macaca mula
ID	Q9LA13	Q93N27	045848	045846	09X708	045851	Q9ZAJ8	093G71	Q933K0	208077	Q8GR96	Q9ACP4	Q93HT3	085107	O9DGC8	0932н3
DB	7	7	7	~1	7	7	7	7	7	7	7	16	7	13	13	12
% Query Match Length DB	451	1310	361	361	441	1268	1291	1291	1291	1291	1291	2082	1291	16	91	228
% Query Match	41.6	41.6	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	23.4	22.8	22.4	22.4	22.3
Score	114	114	64	64	64	64	64	64	64	64	64	64	62.5	61.5	61.5	61
Result No.	1	2	Э	4	2	9	7	8	6	10	11	12	13	14	15	16

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Gaps

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41.6%; Score 114; DB 2; Length 451; 95.5%; Pred. No. 1.8e-06; Live 1; Mismatches 0; Indels

Best Local Similarity 95.59 Matches 21; Conservative

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Query Match

16 LFNNFTVSFWLRVPKVSASHLE 37

PRT; 1310 AA.

093N27; 01-DEC-2001 (TrEMBLrel. 19, Created)

PRELIMINARY;

Q93N27

RESULT 2 Q93N27 ID Q93N2 AC Q93N2 DT 01-DI

	0948471 0948671 0910v5 096m97 070595 09629 09629 09437 091295 091295 091295 091295 091295 095295 095295	MENTS 451 AA.	tio Wu k/I
09X8T8 057236 09FF71 09FF83 045967 09FB81 090YWB9 090YWB9 090YWB9 090YWB9	09W9F7 09W9F7 0910V5 0910V5 096KN97 090C29 09DC29 09DC29 09DC29 09DC29 09DC29 09DC29 09DC29 09DC29 09DC20 09VF20 09VF20 09FZ70	Q9KWB3 ALIGNMENTS PRT; 451 i	Trel. 23, Last annota gment). Es; Clostridia; Clost annota so to the EMBL/GenBan so the EMBL/G
16 10 10 10 10 10 10 10 10 10 10 10 10 10		2 2 115,	Y., vx., vx., vx., vx., vx., vx., vx., vx
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222.	000000000000000000000000000000000000000		(Tr tet tet irmi 1513 1513 OM N 66, 1 H. of 06 07 0828; 828; 828; 87 87 87 87 87 87 87 87 87 87
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The present sequence represents a peptide immunogen comprising an invasin domain immunostimulatory peptide of Versinia sp., a synthetic helper T cell (Th) epitope and a target antigen, luteinising bormone-releasing hormone (LHRH). The synthetic The epitope is derived from the structured synthetic antigen library (SSAL) designated SSAL1 Th1. SSAL Th1 is modelled after a promiscuous epitope taken from the F protein of the Measles virus. The peptide immunogens cause induction of a specific immune response to LHRH which is involved in regulation of specific immunes. Provision of a promiscuous T helper epitope (which is functional in genetically diverse subjects) provides optimum (C functional in genetically diverse subjects) provides optimum (C inmunogenicity to the B cell epitopes of the target antigen man thus chip antibody titres against the target antigen. The peptide immunogens of the invention are used to vaccinate against mammalian LHRH, for use as (reversible) contraceptive; control of hormone-dependent tumours (cancer of prostate or breast, also endometriosis); to prevent boar actinit (and improve meat quality) and for immunocastration.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ä
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               New peptide immunogen containing lutelnising hormone-releasing hormone antigen site and helper {\tt T} cell epitope, for e.g. contraception and treatment of cancer -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
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/note= "LHRH antigenic epitope AAY68566"
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Chimeric - Rattus sp.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY91179
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c immunocastration); for promoting the growth of animals; or for immunocastration); for promoting the growth of animals; or torating allergies or arteriosclerosis. Incorporation of a promiscuous of the functional in genetically diverse subjects) into an immunogen consistence a strong T helper cell-mediated immune response, resulting in production of antibodies against a target carrier proteins and pathogen-derived T helper ceptropes. Sequence AAY91121 represents a promiscuous T helper epitope from the measles virus F (MVF) protein and sequences AAY91122 represents a promiscuous Th epitope from the measles virus F (MVF) protein and sequences AAY91121 represents a promiscuous Th epitope from the meastles virus (HWY) surface antigen, and sequence AAY91141 represents a promiscuous Th epitope at AAY91142 are synthetic epitopes derived from this HBV epitope. AAY91149, surface antigen, and sequence AAY91149, surface antigen, and sequence AAY91149, souther contributed from this HBV epitope. AAY91197 are synthetic epitopes derived from this HBV epitope. AAY91197 comprising an LHRH sequence joined to a promiscuous Th epitope. AAY91197 comprising sometostatin, and AAY91201-Y91207 are antigenic peptides comprising sometostatin, and a Th epitope. Sometostatin and a Th epitope. Sometostatin and AAY91201-Y91204 south of a human IgE (Ammunogens may be used to promote growth in livestock. AAY91208 is a poptide derived from an antigenic site, and AAY91209-Y90211 are MH Th epitope. AAY91220 is a peptide derived from foot and mouth disease virus (FMDV) VPI capsid protein and AAY91221-Y91225 comprise the CS antigen and an AAY91220 is a plasmodium falciparum circumsporozolie (SS) target antigen, and AAY91222-Y91241 are immunogens comprising a certipope which may be used to prevent or treat antigen, and AAY91222-Y91241 are immunogens comprising a present certipope and may be used in an allaria vaccine. AAY91225 and AAY91225-Y91241 are mallarial vaccine and AAY91232-Y91241 are immunogens comprising a present certipope and may be used 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY91258-Y91273 are antigenic peptides comprising MVH Th and HIV-1 B-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        protein epitope from Yersinia species, and hinge spacer pertide, both of which may optionally be used in the antigenic peptides of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   The invention relates to novel promiscuous T helper cell epitopes (Th), and immunogenic peptides comprising the Th epitopes of the invention along with B cell epitopes. The Th epitopes and peptide immunogens containing them, are used to induce a T helper cell response, specifically against Plasmodium falciparum, cholesteryl ester transport protein (CETP) or HIV epitopes, but more generally against any pathogen, immunoreactive self-antigen or tumour antigen. The Th epitopes and peptide immunogens may be used for prevention and/or treatment of infections (HIV, foot-and-mouth disease or malaria); for cancer immunotherapy; for inhibition of the action of luteinising hormone
                                                                                                                                                                                                                                                                                                                                                     New artificial T helper cell epitope and derived immunogens with target antigenic site, for immunization against e.g. malaria, arteriosclerosis or human immune deficiency virus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAY91198 and AAY91199 are respectively an immunostimulatory invasin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    epitope which may be used as a component in an anti-HIV-1 vaccine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   releasing hormone (LHRH) for contraception, treatment of hormone-dependent cancer, prevention of boar taint in meat, and immunocastration); for promoting the growth of animals; or for
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                are HIV-1 neutralising B-cell epitopes, and AAY91248-Y91251 and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Example 1; Page 86; 129pp; English.
                                                                                                                                                                                        (UNBI-) UNITED BIOMEDICAL INC
                                                                              99WO-US13975.
                                                                                                                                  98US-0100412.
                                                                                                                                                                                                                                                                                                   WPI; 2000-160564/14.
                                                                              21-JUN-1999;
                                                                                                                                    20-JUN-1998;
                          29-DEC-1999
                                                                                                                                                                                                                                               Wang CY;
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66.9%; Score 107; DB 21; Length 31;

31 AA;

Sequence Query Match

W09966957-A2

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invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                        Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  AAY68573;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 14
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                The invention relates to novel promiscuous T helper cell epitopes (Th),
and immunogenic peptides comprising the Th epitopes of the invention
closed with B cell epitopes. The The pitopes and peptide immunogens
containing them, are used to induce a T helper cell response,
containing them, are used to induce a T helper cell response,
specifically against Plasmodium falciparum, cholesteryl ester transport
containing (CEPP) or HIV Pitopes, but more generally against any pathogen,
immunoreactive self-antigen or tumour antigen. The Th epitopes and
peptide immunogens may be used for prevention and/or treatment of
containing the infection (HRH) for contraception, treatment of hormone
containing hormone (LHRH) for contraception, treatment of hormone
containing allergies or arteriosclerosis. Incorporation of a promiscuous
contracting allergies or arteriosclerosis. Incorporation of a promiscuous
contracting allergies or arteriosclerosis. Incorporation of a promiscuous
contracting in production of antibodies against a target
contracting and anyll21 represents a promiscuous T helper epitopes
contracting and anyll21 represents a promiscuous T helper epitopes
contracting and anyll21 represents and pathogen-derived on the
                                                             1;
                                                                                                                                                                                                                                                                                                               Promiscuous T-cell epitope; measles virus F protein; MVF; hepatitis B virus surface antigon; HBY; immunogenic; B-cell epitope; luteinising hormone releasing hormone; LHRH; contraceptive; anticancer; somatostatin; growth promotion; CD4 receptor; HIV-1; antiviral; FMDV; foot and mouth disease virus; immunoglobulin B; IgE; anti-allergic; eholesteryl ester transport protein; anti-arteriosclerotic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             New artificial T helper cell epitope and derived immunogens with target antigenic site, for immunization against e.g. malaria, arteriosclerosis
                                                              Gaps
                                                             ;
;
                                                                                                                                                                                                                                                                                      Modified MVF Th epitope/LHRH antigenic peptide, SEQ ID NO:45.
                             67.5%; Score 108; DB 21; Length 27; larity 75.0%; Pred. No. 3.1e-09; Conservative 3; Mismatches 2; Indels
                                                                                       3 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
                                                                                                       Example 1; Page 80; 129pp; English.
                                                                                                                                                                                               A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             or human immune deficiency virus
                                                                                                                                                                                            AAY91165 standard; peptide; 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (UNBI-) UNITED BIOMEDICAL INC.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            99WO-US13975.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98US-0100412.
                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                       Chimeric - Measles virus.
Chimeric - Rattus sp.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-160564/14.
                                          Local Similarity
Les 21; Conserv
   AA;
27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WO9966957-A2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            21-JUN-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         20-JUN-1998;
                                                                                                                                                                                                                                                         22-MAY-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               29-DEC-1999
                                                                                                                                                                                                                         AAY91165;
 Sequence
                             Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Wang CY;
                                               Best Loca
Matches
                                                                                                                                                               RESULT 13
                                                                                                                                                                               AAY91165
S
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WYE Th epitope. Sequence AAY91143 represents a promiscuous Th epitope from hepatitis B virus (HBV) surface antigen, and sequences AAY91155 are synthetic epitopes derived from this HBV epitope. AAY91227 and AAY91242-791244 are antigenic peptides comprising an LHRH sequence joined to a promiscuous Th epitope. AAY91197 comprising an LHRH sequence joined to a promiscuous Th epitope. AAY91200 is somatostatin and a Th epitope. Somatostatin comprising somatostatin and a Th epitope. Somatostatin comprising somatostatin and a Th epitope. Somatostatin comprising somatostatin and a Th epitope. Somatostatin compresses may be used to promote growth, in livestock. AAY91208 is a human CD4 CDR2-like domain antigenic site, and AAY91209-Y90213 are MH Th epitope/CD4 CDR2 antigenic peptides which may be used to prevent HIV common CD4 CDR2-like domain, and AAY90213 is a modified version of a human IgE (immunoglobulin E) CH3 domain, and AAY90213-Y90219 are Th epitope/IgE CH3 antigenic peptides which may be used in the treatment of allergies. AAY91221-Y91222 comprise this peptide and a Th epitope, and AAY91221-Y91222 comprise this peptide and a Th epitope and may be used in a malaria vaccine. AAY91228-Y91231 represent comprise, and AAY91231 represent comprise, and AAY91231 and AAY91228-Y91231 and AAY91257-Y91257 are HIV-1 neutralising B-cell epitopes, and AAY91248-Y91251 and AAY91257-Y91257 are HIV-1 neutralising B-cell epitopes. AAY91241 and AAY91251 and AAY91257-Y91257 and HIV-1 may be used as a component in an antiquence comprising WH Th and HIV-1 B-cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Helper T cell epitope; F protein; Measles virus; peptide immunogen; LHRH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     epitope which may be used as a component in an anti-HIV-1 vaccine. AAY91198 and AAY91199 are respectively an immunostimulatory invasin protein epitope from Yersinia species, and hinge spacer peptide, both of which may optionally be used in the antigenic peptides of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      luteinising hormone_releasing hormone; spermatogenesis; ovulation; oestrus; sexual development; sex hormone; promiscuous T helper epitope; vaccine; contraceptive; hormone-dependent tumour; prostate cancer; breast cancer; endometriosis; boar taint; meat quality;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Peptide immunogen comprising a Th epitope and LHRH target antigen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 45;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "helper Th epitope AAY68544"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 108; DB 21;
Pred. No. 5.7e-09;
4; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "invasin domain AAY68565"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      3 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 invasin domain; immunocastration.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "spacer"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAY68573 standard; peptide; 45
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           67.58;
71.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-MAY-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               20; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note=
34..35
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36..45
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        45 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Yersinia sp.
Measles virus.
Unidentified.
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infections (HIV, foot-and-mouth disease or malaria); for cancer immunotherapy; for inhibition of the action of luteinising hormone clarks for contraception, treatment of hormone-classing hormone (LikH) for contraception, treatment of hormone-contraception, treatment of hormone-contraction); for promoting the growth of animals; or for immunosatration); for promoting the growth of animals; or for treating allergies or arteriosclerosis. Incorporation of a promiscuous of the improves capacity to induce a strong T helper cell-mediated immune improves resulting in production of antibodies against a target response, resulting in production of antibodies against a target contingence arrelated protects and pathogen-derived T helper cepitopes. Sequence AAY91121 represents a promiscuous T helper epitope from the measles virus F (MVF) protects and sequences AAY91122-791142, AAY9125 and AAY9124 represents a promiscuous Thepitope from hepatitis B virus (HBV) surface antigen, and sequences AAY9114-Y91155 are synthetic epitopes derived from this HBV epitope. comprising an LHRH sequence joined to a promiseuous The pittope. AAV91197

is the LHRH target antigenic peptide used in these LHRH antigenic

peptides. AAV91200 is somatostatin, and AAV91201-Y91207 are antigenic

peptides. AAV91200 is somatostatin, and AAV91201-Y91207 are antigenic

peptides comprising somatostatin, and AAV91207 are antigenic

immunogens may be used to promote growth in livestock. AAV91208 is a

condition of CDR2-like domain antigenic site, and AAV91209-Y90211 are MV Th

contrope/CD4 CDR2 antigenic peptides which may be used to prevent HIV

contrope/CD4 CDR2 antigenic peptides which may be used to prevent HIV

contrope/CD4 CDR2 antigenic peptides which may be used in the treatment of allergies.

contrigenic peptides which may be used in the treatment of allergies.

contrigenic peptide derived from foot and mouth disease virus (FMDV)

contropers aAV91223 is a Plasmodium foliparum circumsporzozite (CS) target

contrope and may be used in a malaria vaccine. AAV9128-Y91231 represent

contropers and AAV91232-Y91232-Y91232-Y91232-Y9123 are HIV-1 neutralising B-cell epitopes, and AAV91248-Y91251 and AAV91258-Y91273 are antigenic peptides comprising MVH Th and HIV-1 B-cell epitope which may be used as a component in an anti-HIV-1 vaccine.
AAY91198 and AAY91199 are respectively an immunostimulatory invasin
protein epitope from Yersinia species, and hinge spacer peptide, both of
which may optionally be used in the antigenic peptides of the nvention

27 AA; Sednence

Gaps 5 Score 108; DB 21; Length 27; Pred. No. 3.1e-09; 4; Mismatches 2; Indels 67.5%; S71.4%; E Similarity 71.4 20; Conservative Query Match Best Local S: Matches 20

ij

3 LSEIKGVIVHRLEGVEGPSLHWSYGLRP 30 ò g

RESULT 12 AAY91167

AAY91167 standard; peptide; 27 AA

AAY91167;

22-MAY-2000 (first entry)

Modified MVF Th epitope/LHRH antigenic peptide, SEQ ID NO:47.

Promiscuous T-cell epitope; measles virus F protein; MVF; hepatitis B virus surface antigan; HBV; immunogenic; B-cell epitope; luteinising hormone releasing hormone: LHRH; contraceptive; anticancer; somatostatin; growth promotion; CD4 receptor; HIV-1; antiviral; FMDV; foot and mouth disease virus; immunoglobulin E; IgE; anti-allergic; Plasmodium falciparum; circumsporcoxite; antimalarial; CFTP; cholesteryl ester transport protein; anti-arteriosclerotic.

Chimeric - Measles virus.

Chimeric - Rattus sp.

WO9966957-A2.

29-DEC-1999

99WO-US13975. 21-JUN-1999; 98US-0100412.

(UNBI-) UNITED BIOMEDICAL INC.

WPI; 2000-160564/14.

New artificial T helper cell epitope and derived immunogens with target antigenic site, for immunization against e.g. malaria, arteriosclerosis or human immune deficiency virus

Example 1; Page 81; 129pp; English.

The invention relates to novel promiscuous T helper cell epitopes (Th), and immunogenic peptides comprising the Th epitopes of the invention along with B cell epitopes. The Th epitopes and peptide immunogenic peptides comprising the The pitopes of the invention and or along with B cell epitopes. The The peitopes of the invention and or containing them, are used to induce a T helper cell response. Specifically against Plasmodium falcabear or malarial specifically against Plasmodium falcabear or malarial specifically appations or containing them or theorem in the Thepitopes and peptide immunogens may be used for prevention and/or treatment of infections (HIV, foot-and-mouth disease or malarial); for cancer immunoctherapy; for inhibition of the action of luteinising hormone clarent prevention of boar taint in meat, and manunoes and patentics or arterioscelerosis. Incorporation of a promiscuous of immunocastration); for promoting the growth of animals or for treating alterates or arterioscelerosis. Incorporation of a promiscuous of the functional in genetically diverse subjects) into an immunogen improves capacity to induce a strong T helper cell-mediated immune response, resulting in production of antibodies against a target or from the measles virus F (WFF) protein and sequence AAY9112. represents a promiscuous T helper cell-mediated immune response, resulting in production of antibodies against a target optiopes. Sequence AAY91143 represents a promiscuous The pitope Comprise. Sequence AAY91143 represents a promiscuous The pitope Comprise. Sequence AAY91144 represents a promiscuous The pitope Comprise. Sequence AAY91144 represents a promiscuous The pitope Comprise. Sequence AAY91144 represents a promiscuous The pitope Comprising an LiHR sequence joined to a promiscuous The pitope. AAY91197 are synthetic epitopes derived from this HBV epitope. Sequence AAY91144 represents a promiscuous The pitope Comprising an LiHR sequence joined to a promiscuous The pitope. AAY91201 is a peptide sea for promote growth in livesto are HIV-1 neutralising B-cell epitopes, and AAV91248 r91251 and AAV91258-Y91273 are antigenic peptides comprising WVH Th and HIV-1 B-cell epitope which may be used as a component in an anti-HIV-1 vaccine. AAV91198 and AAV91199 are respectively an immunostimulatory invasin protein epitope from Yersinia species, and hinge spacer peptide, both of which may optionally be used in the antigenic peptides of the ö

Gaps

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Modified MVF Th epitope/LHRH antigenic peptide, SEQ ID NO:55.
                                                                                                                    Example 1; Page 84; 129pp; English.
                                                                                  (UNBI-) UNITED BIOMEDICAL INC
                                                                           98US-0100412.
                                                                   99WO-US13975.
22-MAY-2000 (first entry)
                                          Chimeric - Measles virus.
Chimeric - Rattus sp.
                                                                                                WPI; 2000-160564/14.
                                                     WO9966957-A2.
                                                                   21-JUN-1999;
                                                                           20-JUN-1998;
                                                            29-DEC-1999
                                                                                         Wang CY;
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antigen, and AAY91224-Y91225 comprise the CS antigen and an MVF The epitope and may be used in a malaria vaccine. AAY91228-Y9121 represent cerp-derived peptides and AAY9122-Y91241 are immunogens comprising a CETP-derived peptide and a Th epitope which may be used to prevent or treat arteriosclerosis and cardiovascular disease. AAY91247 and AAY91251 and AAY91258-Y91251 and AAY91258-Y91273 are antigenic peptides comprising MWF Th and HIV-1 B-cell epitope which may be used as a component in an anti-HIV-1 vaccine. AAY91199 are respectively an immunostimulatory invasin protein epitope from Yersinia species, and hinge spacer peptide, both of which may optionally be used in the antigenic peptides of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       containing them, are used to induce a T helper cell response, specifically against Plasmodium falciparum, cholesteryl ester transport protein (CETP) or HIV epitopes, but more generally against any pathogen immunoreactive self-antigen or tumnur antigen. The PI epitopes and peptide immunogens may be used for prevention and/or treatment of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Promiscuous T-cell epitope; measles virus F protein; MVF; hepatitis B virus surface antigen; HBV; immunogenic; B-cell epitope; luteinising hormone releasing hormone; LHRH; contraceptive; anticancer; somatostatin; growth promotion; CD4 receptor; HIV-1; antiviral; FMDV; foot and mouth disease virus; immunoglobulin E; IgE; anti-allergic; plasmodium falciparum; circumsporozocite; antimalaria; CETP; cholestery! ester transport protein; anti-arteriosclerotic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     New artificial T helper cell epitope and derived immunogens with target antigenic site, for immunization against e.g. malaria, arteriosclerosis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  The invention relates to novel promiscuous T helper cell epitopes (Th), and immunogenic peptides comprising the Th epitopes of the invention along with B cell epitopes. The Th epitopes and peptide immunogens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Modified MVF Th epitope/LHRH antigenic peptide, SEQ ID NO:41.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       68.8%; Score 110; DB 21; Length 31; 78.6%; Pred. No. 1.8e-09;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAY91161 standard; peptide; 27 AA
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Chimeric - Rattus sp.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            The invention relates to novel promiscuous T helper cell epitopes (Th), along with B cell epitopes. The The pitopes of the invention along with B cell epitopes. The The pitopes and peptide immunogens containing them, are used to induce a T helper cell response, specifically against Plasmodlum falciparum, cholesteryl ester transport protein (ETP) or HIV epitopes, but more generally against any pathogen, immunoreactive self-antigen or thmour andigen. The The pitopes and peptide immunogens may be used for prevention and/or treatment of infections (HIV, foot-and-mouth disease or malaria); for cancer immunotherapy; for inhibition of the action of luteinising hormone releasing hormone (LHRH) for contraception, treatment of hormone dependent cancer, prevention of boar taint in meat, and immunogen treating allergies or arteriosclerosis. Incorporation of a promiscuous of thortional in genetically diverse subjects) into an immunogen improves capacity to induce a strong T helper cell-mediated immune response, resulting in production of antibodies against a target antitone continue and pathogen derived T helper antitone and the pathogen and pathogen derived T helper antitone and the pathogen derived T helper antitoner and the pathogen of the pathogen and th
                                                                                                                                                                      Promiscuous T-cell epitope, measles virus F protein, MVF; hepatitis B virus surface antigon; HBV; immunopenic; B-cell epitope; luteinising hormone releasing hormone: LHRH; contraceptive; anticancer; somatostatin; growth promotion; CD4 receptor; HIV-1; antiviral; FMDV; foot and mouth disease virus; immunoploblin E; IgE; anti-allergic; Plasmodium falciparum; circumsporozoite; antimalarial; CEFP; cholesteryl ester transport protein; anti-arteriosclerotic.
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pathogen, and of

PRIOR APPLICATION DATA:

APPLICATION NUMBER:

14-APR-1994

US 08/229,275

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; MOLECULE TYPE: US-08-446-692-57
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Best Local Similarity
Matches 23; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                    CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: MAILA C.H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)415-8745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO:
                                                                                  TELEFAX: (516)751-6849
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
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LENGTH: 27 amino acids
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TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
NUMBER OF SEQUENCES: 114
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NAME: Maria C.H. Lin
REGISTRATION NUMBER: 29,323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
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TELECOMMUNICATION INFORMATION:
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                                            TYPE: amino acid
                                                                                                                                                                                                                                                               APPLICATION NUMBER: US/08/446,692 FILING DATE: 7-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET: 345 Pa:
CITY: New York
STATE: NY
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TOPOLOGY: linear
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                                   TOPOLOGY:
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                                                                                                                                                                                                                                                                                                                                                                                                              10154-0053
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5759551
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345 Park Avenue
                                                                   37 amino acids
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                peptide
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85.2%;
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Pred. No. 5.
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US-08-488-351A-57
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US-08-446-692-63
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                                                                                                                         Sequence 57, Application US/08488351A Patent No. 5843446
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      GENERAL INFORMATION:

APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stime
NUMBER OF SEQUENCES: 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                     INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/446,692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CORRESPONDENCE ADDRESS:
ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS:
LENGTH: 37 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TELECOMMUNICATION INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                   LENGTH: 37 amino TYPE: amino acid TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Maria C.H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 7. CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CITY: New York
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTRY:
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16; Conserv
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(516)751-6849
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                                                                                                                                                                                                                                                                                                                                                                    peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7-JUN-1995
                                                                                                                                                                                                                                                                                  54.1%; Score 80;
100.0%; Pred. No
tive 0; Mismat
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100.0%; Pred. No.
Live 0; Mismatc
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                                                                                                                                                                                                                                                                                       Mismatches
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                                                                                                                                                                                                                                                                                                    DB 1; L
9.4e-06;
                                                                                                                                                                                                                                                                                                                  Length 37;
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                            stimulators for vaccines
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CITY: New York

ADDRESSEE: Maria C.H. Lin STREET: 345 Park Avenue

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match
Best Local S
Matches 16
                                                                                                                                                                                                                                                                                                                 Sequence 63, Patent No. 5
COUNTRY: UZIP: 10154-0053
ZIP: 10154-0053
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
MEDIUM TYPE: Floppy disk
""""FIM PC compatible
""""FIM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                  GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TELEFAX: (516)751-6849 INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                 NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                    TITLE OF INVENTION:
                                                                                                                                                                                                                                               APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: [FILING DATE: 7-JUN-19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ZIP: 1013 TORM:
COMPUTER READABLE FORM:
TYPE: Floppy disk
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/229,275
                                                                                                                    CITY: New York
STATE: NY
                                                                                                                                                    STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER: IBM PC
OPERATING SYSTEM:
SOFTWARE: PatentI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TELEPHONE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/
FILING DATE: 7-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity
les 16; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
                                                                                                                                                                     ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
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Maria C.H. Lin
29,323
                                                                                                                                                                                                                                                                                                                   3, Application US/08488351A 5843446
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                                                                                                                                                      345 Park Avenue
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IBM PC compatible SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                     Maria C.H. Lin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (212)415-8745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             peptide
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7-JUN-1995
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                                                                                                                                                                                                                  Immunogenic LHRH peptide constructs and synthetic universal immune stimulators for vaccines
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         54.1%; Score 80;
100.0%; Pred. No.
Live 0; Mismatc
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US-08-945-289-8
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                     MEDIUM TYPE: floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: Windows 95
SOFTWARE: Word 97
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                             COMPUTER READABLE FORM: MEDIUM TYPE: Floppy
                                                                                                                                                                                                                                                                                                                                  CORRESPONDENCE ADDRESS:
ADDRESSEE: Yankwich & Associates
STREET: 130 Bishop Allen Drive
                APPLICATION NUMBER: 08/43
FILING DATE: May 1,1995
ATTORNEY/AGENT INFORMATION:
NAME: LEON R. Yankwich
                                                                                 CLASSIFICATION: 514
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Rittershaus, Charles, W. APPLICANT: Thomas, Lawrence J. TITLE OF INVENTION: MODULATION OF CTITLE OF INVENTION: TRANSFER PROTEI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MOLECULE TYPE: peptide
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TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: Maria C.H. Lin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
PRIOR APPLICATION NUMBER: US 08/229,275
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APPLICATION NUMBER: US 08/446,692
FILING DATE: 7-JUN-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION DATA:
                                                                                                                    FILING DATE:
                                                                                                                      APPLICATION NUMBER: US/08/945,289 FILING DATE: October 17, 1997
                                                                                                                                                                                                                                                                                                                    CITY: Cambridge
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION: 424
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US/I
FILING DATE: 7-JUN-1995
                                                                                                                                                                                                                                                                                  COUNTRY:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Local
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REGISTRATION NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   8, Application US/08945289
5. 6555113
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                                                                                                                                                                                                                                                                                                   Massachusetts
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                                                                                                                                                                                                                                                                                  USA
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(516)751-6849
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                                                                                                                                                                                                                                                                                                                                                                                                          MODULATION OF CHOLESTERYL ESTER TRANSFER PROTEIN (CETP) ACTIVITY
                                                                  08/432,483
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .4e-06;
s 0;
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                                                                                                                            RESULT 11
US-08-197-484-110
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-945-289-8
                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 25
LENGTH: 24
                                                                             Patent No. 6419931 GENERAL INFORMATION:
                                                                                                Sequence 110, Application US/08197484 Patent No. 6419931
                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                        Query Match
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Epinmune, Inc.
APPLICANT: Vitiello, Maria
APPLICANT: Chesnut, Robert
TITLE OF INVENTION: HLA-RESTRICTED HEPATITIS B VIRUS CTL
TITLE OF INVENTION: EPITOPES
FILE REFERENCE: 39963-20001.13
CURRENT EPPLICATION NUMBER: US/08/464,496
CURRENT FILING DATE: 1995-06-05
PRIOR APPLICATION NUMBER: 07/935,811
PRIOR FILING DATE: 1992-08-26
PRIOR FILING DATE: 1992-08-26
PRIOR FILING DATE: 1992-08-26
PRIOR FILING DATE: 1992-08-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRIOR APPLICATION NUMBER: 07/874,491
PRIOR FILING DATE: 1992-04-27
PRIOR APPLICATION NUMBER: 07/827,682
PRIOR FILING DATE: 1992-01-29
PRIOR APPLICATION NUMBER: 07/749,568
PRIOR FILING DATE: 1991-08-26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -08-464-496-25
                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                     ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                          FEATURE:
                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MOLECULE TYPE: peptide HYPOTHETICAL:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
                  APPLICANT
                                 APPLICANT:
                                                APPLICANT:
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                                                                                                                                                                                                                                                                            Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ENGTH:
                                                                                                                                                                                           16;
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                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              : 50 amino acids
amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Application US/08464496
SETTE, Alessandro D.
CELIS, Esteban
GRAY, Howard
                                               VITIELLO, Maria A. CHESTNUT, Robert W.
                                                                                                                                                                                                                                                           Conservative
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                                                                                                                                                                                                                                                                          52.0%;
88.9%;
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94.1%;
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Pred. No. 2.7e
0; Mismatches
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                                                                                                                                                                                                                                                                            Pred.
                                                                                                                                                                                                                                                                                         Score 77;
                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                            No.
                                                                                                                                                                                                                                                                          1.7e-05
                                                                                                                                                                                                                                                                                         DB 4;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  .7e-05;
                                                                                                                                                                                                                                                                                         Length 24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Length 50;
                                                                                                                                                                                                                                                           Indels
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PCT-US92-07218-25
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                                                                                                                                                                                                          Sequence 25, Application PC/TUS9207218 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: (206) 623-67 INFORMATION FOR SEQ ID NO:
                                                                                                                           APPLICANT: VITIELIO,
APPLICANT: Chesnut, F
TITLE OF INVENTION: F
TITLE OF INVENTION: F
RUMBER OF SEQUENCES:
                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend
STREET: One Market Plaza, Steuar
CITY: San Francisco
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 24 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Townsend and Townsend Khourie and Crew
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELECOMMUNICATION INFORMATION: TELEPHONE: (206) 467-9600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 29-JAN-
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
FILING DATE: 26-AUG-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION: 424
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Release #1.0, CURRENT APPLICATION DATA:
 COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  FILING DATE: 26-AUG-1992 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE: 27-APR-PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES:
                  COUNTRY: U
ZIP: 94105
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Parmelee, Steven REGISTRATION NUMBER: 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US 0' FILING DATE: 29-JAN-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: FILING DATE: 26-AUG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: FILING DATE: 16-FEB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                                                                                                       l Similarity
16; Conserv
                                                                                                                                                                                                                                                                                                                                       1 QYIKANSKFIGITELGPS 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                San Francisco
                                                                                                                                                                                                                                                                                                         QYIKANSKFIGITEFLPS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    amino acid
                                               California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                California
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                                                                                                                                                                            Vitiello, Maria A. Chesnut, Robert W.
                                                                                                                                                                                                                                                                                                                                                                       Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                IBM PC compatible SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                 peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       unknown
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                                                                                                                                                                                                                                                                                                                                                                                     52.0%;
88.9%;
                                                                                                                                            EPITOPES
                                                                                                                                                              HLA-RESTRICTED HEPATITIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CTL IMMUNITY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 US 07/935,811
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Pred. No. 1
                                                                               Steuart Street Tower
                                                                                                                                                                                                                                                                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                      DB 4;
1.7e-05;
                                                                                                                                                              B VIRUS CTL
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Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 110, Application PC/TUS9502121 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: US 0: FILING DATE: 16-FEB-1994 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                    CLASSIFICATION DATA:
PRIOR APPLICATION NUMBER: US 08/197,484
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOUTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TITLE OF INVENTION:
TITLE OF INVENTION:
NUMBER OF SEQUENCES:
                                                                                                                                                                     PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07
FILING DATE: 27-APR-1992
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TELECOMMUNICATION INFORMATION:
TELEPHONE: 415-326-2400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TOPOLOGY: 1: MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS:
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NAME: Smith, William M.
REGISTRATION NUMBER: 30,
                                               PRIOR APPLICATION DATA:
                                                                                                                                       PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
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                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US 07 FILING DATE: 26-AUG-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE: 1 CLASSIFICATION:
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OPERATING SYSTEM: .PC-DOS/MS-DOS
OPERA
                                                                                                            APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STRANDEDNESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICATION NUMBER: FILING DATE: 26-AU
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICATION NUMBER: POFILING DATE: 19920826
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COMPUTER: I
             APPLICATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER:
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                                                                          UMBER: US 07/827,682
29-JAN-1992
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16-FEB-1995
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26-AUG-1991
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COMPOSITIONS AND METHODS FOR ELICITING CTL IMMUNITY 153
                                                                                                                                                                                                                                                                                                         US 07/935,811
                                                                                                                                                                                                          US 07/874,491
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PCT/US95/02121
             US 07/749,568
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 5;
1.7e-05;
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                                                                                                                                                                                                                                                                                                         Дb
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APPLICANT: Vitiello, Maria A.
APPLICANT: Chesnut, Robert W.
TITLE OF INVENTION: HLA-RESTRICTED HEPATITIS B VIRUS CTL
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RESULT 15
PCT-US92-07218-32
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US-08-464-496-32
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                                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: 07/935,811
PRIOR FILING DATE: 1992-08-26
PRIOR APPLICATION NUMBER: 07/874,491
PRIOR FILING DATE: 1992-04-27
PRIOR APPLICATION NUMBER: 07/827,682
PRIOR FILING DATE: 1992-01-29
PRIOR APPLICATION NUMBER: 07/749,568
PRIOR APPLICATION NUMBER: 07/749,568
PRIOR FILING DATE: 1991-08-26
Sequence 32, Application PC/TUS9207218 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 32
LENGTH: 27
                                                                                                                                                                                         Query Match
Best Local
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                                                                                                                                                                           Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Epimmune, Inc.
APPLICANT: Vitiello, Maria
APPLICANT: Vitiello, Maria
APPLICANT: Chesnut, Robert
TITLE OF INVENTION: HLA-RESTRICTED HEPATITIS
TITLE OF INVENTION: EPITOPES
FILE REFERENCE: 39963-20001.13
CURRENT APPLICATION NUMBER: US/08/464,496
CURRENT FILING DATE: 1995-06-05
CURRENT FILING DATE: 1995-06-05
                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: FastSEQ for Windows Version
                                                                                                                                                                                                                                                                                                                                                                                   NUMBER OF SEQ ID NOS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                            OTHER INFORMATION: Oligopeptide
                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                            ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                 TYPE: PRT
                                                                                                                                                                                                                                                                                                                                 ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE CHARACTERISTICS:
LENGTH: 24 amino acids
TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME: Parmelee, Steven W.
REGISTRATION NUMBER: 31,990
REFERENCE/DOCKET NUMBER: 14:
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                         Local Similarity
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                                                                                                                                  1 QYIKANSKFIGITELGPS 18
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                                                                                                     QYIKANSKFIGITEFLPS 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (415) 543-5043
                                                                                                                                                                         Conservative
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                                                                                                                                                                                        Score 77; DB 4;
Pred. No. 2e-05;
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Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              14137-26-4PC
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                                                                                                                                                                                                         Length 27;
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COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER READABLE FORM:
COMPUTER EIBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US 07/749,568
FILING DATE: 26-AUG-1991
PRIOR APPLICATION NUMBER: US 07/827,682
FILING DATE: 29-JAN-1992
PRIOR APPLICATION NUMBER: US 07/874,491
FILING DATE: 27-APR-1992
ATTORNEY/AGENT INFORMATION:
NAME: SMITH, WILLIAM M.
REGISTRATION NUMBER: 30,23
REFERENCE/DOCKET NUMBER: 14137-26-3
TELEPHONE: 415-326-2400
TELEPHONE: 415-326-2400
TELEPHONE: 415-350-43
INFORMATION FOR SEQ ID NO: 32:
SEQUENCE CHARACTERISTICS:
LENGTH: 27 amino acids
TYPE: AMINO ACID
STRANDEDNESS: SINGLE
TOPOLOGY: Linear
MOLECULE TYPE: protein
PCT-US92-07218-32
Search completed: September 24, 2003, 17:00:22 Job time: 8.39917 secs
                                                                                         밁
                                                                                                                             Š
                                                                                                                                                                        Query Match 52.0%;
Best Local Similarity 88.9%;
Matches 16; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TITLE OF INVENTION: EPITOPES

NUMBER OF SEQUENCES: 35

CORRESPONDENCE ADDRESS:

ADDRESSEE: Townsend and Townsend

STREET: One Market Plaza, Steuart Street Tower

CITY: San Francisco

STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COUNTRY: US
ZIP: 94105
                                                                                                              1 QYIKANSKFIGITELGPS 18
                                                                                       4 QYIKANSKFIGITEFLPS 21
                                                                                                                                                                      Score 77; DB 5; Pred. No. 2e-05; 0; Mismatches
                                                                                                                                                                            2:
                                                                                                                                                                                                                Length 27;
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protein -	
protein - protein search, using sw model	GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd
using sv	GenCore version 5.1.6 (c) 1993 - 2003 Compuge
model	version - 2003
	5.1.6 Compugen
	Ltd.

Title: US-09-848-834A-11
Perfect score: 148
Sequence: 1 QYIKANSKFIGITELGPSLHV

OM prot

September 24, 2003, 16:57:10;

10 ; Search time 14.0388 Seconds (without alignments) 301.778 Million cell updates/sec

Sequence: 1 QYIKANSKFIGITELGPSLHWSYGLRPX 28
Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 566894 seqs, 151307093 residues

Total number of hits satisfying chosen parameters: 566894

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database: Published_Applications_AA:*

1: /cgn2_6/ptodata/2/pubpaa/USO7_PUBCOMB.pep:*

2: /cgn2_6/ptodata/2/pubpaa/USO6_NEW_PUB.pep:*

3: /cgn2_6/ptodata/2/pubpaa/USO6_NEW_PUB.pep:*

4: /cgn2_6/ptodata/2/pubpaa/USO6_NEW_PUB.pep:*

5: /cgn2_6/ptodata/2/pubpaa/USO8_NEW_PUB.pep:*

6: /cgn2_6/ptodata/2/pubpaa/USO8_NEW_PUB.pep:*

7: /cgn2_6/ptodata/2/pubpaa/USO8_NEW_PUB.pep:*

8: /cgn2_6/ptodata/2/pubpaa/USO8_NEW_PUB.pep:*

9: /cgn2_6/ptodata/2/pubpaa/USO8_PUBCOMB.pep:*

10: /cgn2_6/ptodata/2/pubpaa/USO9A_PUBCOMB.pep:*

11: /cgn2_6/ptodata/2/pubpaa/USO9M_PUBCOMB.pep:*

12: /cgn2_6/ptodata/2/pubpaa/USO9M_PUBCOMB.pep:*

13: /cgn2_6/ptodata/2/pubpaa/USO9M_PUBCOMB.pep:*

14: /cgn2_6/ptodata/2/pubpaa/USO9M_PUBCOMB.pep:*

15: /cgn2_6/ptodata/2/pubpaa/USO0_NEW_PUB.pep:*

16: /cgn2_6/ptodata/2/pubpaa/USO0_NEW_PUB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

15	14	13	12	11	10	9	8	7	6	5	4	ω	2	_	Result
74	74	76	76	76.5	77	78	78	80	80	81.5	81.5	112.5	136	147	Score
50.0	50.0	51.4	51.4	51.7	52.0	52.7	52.7	54.1	54.1	55.1	55.1	76.0	91.9	99.3	Query Match
15	15	31	31	51	24	50	50	137	32	33	31	27	46	28	Query Match Length DB
10	φ	15	9	9	15	15	9	12	12	9	12	12	9	9	
US-09-785-215-4	US-09-862-849-2	US-10-339-522-2	US-09-943-548-2	US-09-848-834A-20	US-10-128-711-110	US-10-339-522-8	US-09-943-548-8	US-10-237-656-3	US-10-237-656-5	US-09-848-834A-12	US-10-237-656-1	US-10-076-674-7	US-09-848-834A-19	US-09-848-834A-11	ID
Sequence 4, Appli	Sequence 2, Appli	Sequence 2, Appli	Sequence 2, Appli	Sequence 20, Appl	Sequence 110, App	Sequence 8, Appli	Sequence 8, Appli		Sequence 5, Appli		Sequence 1, Appli	Sequence 7, Appli	•	Sequence 11, Appl	Description

ALIGNMENTS

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OTHE	LOCAS	NAME/KEY: PEPTIDE	OTHE	LOCA	NAME/KEY: PEPTIDE	OTHE	OTHE	LOCATION: (1)(15)	NAME/KEY: PEPTIDE	OTHE	LOCA	NAME/KEY: MOD_RES	OTHE	LOCA	NAME/KEY: MOD_RES	OTHER INFORMATION:	OTHER INFORMATION:	OTHER INFORMATION:	FEATURE:	ORGAI	TYPE: PRT	LENG	SEQ ID NO 11	SOFTWARE:	NUMBER OF SEQ ID NOS: 20	PRIOR FILING DATE: 2000-05-05	PRIOR APPLICATION NUMBER: 60/202,328	CURRENT FILING DATE: 2001-05-04	CURRENT APPLICATION NUMBER: US/09/848,834A	FILE REFERENCE: 1102865-0047	TITLE OF INVENTION: Chimeric Peptide	APPLICANT: Aphton Corporation	GENERAL INFORMATION:	Sequence 11, Application US/09848834A	US-09-848-834A-11	erre n 1
RINE	: NOI	KEY:	NINE	FION:	KEY:	RINE	RINE	FION:	/KEY:	RINE	: NOI	KEY:	RINE	CION:	/KEY:	RINE	RINE	RINE	JRE:	NISM:	: PRT	LENGTH: 28	NO 1		OF	FILI	APPL	NT FI	WT AP	REFER	OF I	ANT	INE	ж 11	3-834	
ORMA'	(20	PEP	ORMA	(16	PEP	ORMA'	ORMA'	(1)	PEP	ORMA:	(28	MOD	ORMA'	LOCATION: (1)(1)	MOD	ORMA'	ORMA'	ORMA'		Art		8	_	Pate	SEQ	NG D	ICAT:	LING	PLIC	ENCE	NVEN	Aph	ORMA	, Ap	A-11	
FION:	LOCATION: (20)(28)	TIDE	TON:	LOCATION: (16)(19)	PIDE	TION:	FION:	(15	TIDE	FION:) (2	RES	FION:	(1)	RES	FION:	FION:	FION:		ifici				ntIn	ID NO	ATE:	ION N	DATE	ATION	: 110	TION:	ton	TION:	plica		
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no ac			OTHER INFORMATION: Spacer peptide			OTHER INFORMATION: (Tentoxylysin)	no ac			dated			dated			acid	Sune	neric	٠	ORGANISM: Artificial Sequence				PatentIn version 3.0	J	-05-0	R: 60	001-0	BER:	-0047	neric	ratio	1	us/o		
id se		,	eptio			lysir	id se			-glyc			-glut			sequ	toxo	pept		ce				.0		U	/202,	5-04	30/Sn	,	Pept	B		98488		
OTHER INFORMATION: Amino acid sequence		•	₽ P			٥	OTHER INFORMATION: Amino acid sequence			ine o	LOCATION: (28)(28)		OTHER INFORMATION: Amidated-glutamine			lence	.d pre	Chimeric peptide consisting of amino acid sequence 830-844									328		/848					34A		
							ce 83			or gl			(D			2-10	ecurs	consi											, 834A		Immunogens					
2-10 of	•						0-844			ycina						of t	or (T	sting												,	oqens					
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the human GnRH hormone							etanu									rmon	in) 1	acid																		
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mone							830-844 of the Tetanus Toxoid Precursor										by a	lence								•										
							recu										a spa	830-																		
							rsor									ino acid sequence 2-10 of the GnRH hormone	cer t	844 of																		
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APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR PILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: PatentIn version 3.0
SEQ ID NO 19
                                                                                                                                                                                           Qy
                                                                            RESULT 3
US-10-076-674-7
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                Sequence 7, Application US/10076674 Publication No. US20030165478A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best Loc
Matches
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                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                                                                        Query Match
Best Local
APPLICANT: Sokoll,
                                                                                                                                                                                                                                                                                                                                   NAME/KEY: PEPTIDE LOCATION: (38)..(40 OTHER INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: PEPTIDE
LOCATION: (32)...(37)
OTHER INFORMATION: Spacer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: PEPTIDE
LOCATION: (11)..(16)
OTHER INFORMATION: Spacer peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     OTHER INFORMATION: Amidated glycine or glycinamide NAME/KEY: PEPTIDE LOCATION: (1)..(10) OTHER INFORMATION: Amino acid sequence 1-10 of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: MOD_RES
LOCATION: (1)..(1)
OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of human OTHER INFORMATION: GARH linked by a spacer to amino acid sequence 830-844 of Tetanus OTHER INFORMATION: toxoid precursor (Tentoxylysin) linked by a spacer to amino acid OTHER INFORMATION: sequence 1-10 of GARH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: Amino acid sequence OTHER INFORMATION: (Tentoxylysin)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: PEPTIDE LOCATION: (17)..(31)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: MOD_RES
LOCATION: (46)..(46)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ENGTH: 46
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27; Conserv
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27; Conserv
                                                                                                                                                        QYIKANSKFIGITELSSGPSLHWSYGLRP 45
                                                                                                                                                                                               QYIKANSKFIGITEL--GPSLHWSYGLRP 27
                                                                                                                                                                                                                                      Conservative
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                                                                                                                                                                                                                                                                                                                                   Amino acid sequence 2-10 of the human GnRH hormone
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                                                                                                                                                                                                                                                      91.9%;
93.1%;
                                                                                                                                                                                                                                                                                                                                                                                          peptide
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                                                                                                                                                                                                                                                      Score 136; DB 9;
Pred. No. 4.4e-13
                                                                                                                                                                                                                                      Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                      830-844 of the Tetanus toxoid precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                6.1e-15;
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                                                                                                                                                                                                                                                                         Length 46
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RESULT 5
US-09-848-834A-12
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                                                                                                                                                                                                                                                                          ; GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; OTHER INFORMATION: Description of Artificial Sequence: synthetic peptide US-10-237-656-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          US-10-237-656-1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: SAINT-REMY, Jean-Marie
APPLICANT: JACQUEMIN, MARC
TITLE OF INVENTION: COMPOUND AND METHOD FOR THE PREVENTION AND/OR THE TREATMENT OF
FILE REFERENCE: 2002-0771/LC/01699
FULDE REPUBLICATION NUMBER: US/10/237,656
CURRENT APPLICATION NUMBER: US/10/237,656
CURRENT FILING DATE: 2002-09-10
PRIOR APPLICATION NUMBER: 09/362,731
PRIOR FILING DATE: 1999-07-29
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Lo
                                                       SOFTWARE: PatentIn version 3.0 SEQ ID NO 12 LENGTH: 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQ ID NO 1
LENGTH: 31
                                                                                                                                                                                                                                                                                            Sequence 12, Application US/09848834A Patent No. US20020076416A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SOFTWARE: PatentIn version 3.1 SEQ ID NO 7
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 1, Application US/10237656 Publication No. US20030152581A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
                                                                                                                                                      CURRENT APPLICATION NUMBER: US/09/848,834A CURRENT FILING DATE: 2001-05-04 PRIOR APPLICATION NUMBER: 60/202,328
                                                                                                                                                                                                              APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TITLE OF INVENTION: Stabilized Synthetic Immunogen Delivery System FILE REFERENCE: Immunogen Delivery System CURRENT APPLICATION NUMBER: US/10/076,674
CUGRENT FILING DATE: 2002-04-23
NUMBER OF SEQ ID NOS: 11
                                                                                                                                      PRIOR FILING DATE: 2000-05-05
                                                                                                                 NUMBER OF SEQ ID NOS: 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Version 2.1
              TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TYPE: PRT
ORGANISM: Artificial Sequence
FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TYPE: PRT
ORGANISM: Human
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            l Similarity
19; Conserv
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
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61.3%;
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85.2%;
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Pred. No. 7.1
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OTHER INFORMATION: Chimeric peptide consisting of

amino acid sequence

378-398

of

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Query Match
Best Local Similarity
Tatches 16; Conserve
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Best Local Similarity
"" to hes 16; Conserv:
                                                                                                                                                                           RESULT 7
US-10-237-656-3
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                                                                                                                                                                                                                                                                                                                                                                                                                   ; OTHER INFORMATION: Description of Artificial Sequence: synthetic US-10-237-656-5
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Sequence 3, Application US/10237656
Publication No. US20030152581A1
GENERAL INFORMATION:
APPLICANT: SAINT-REMY, Jean-Marie
APPLICANT: JACQUEMIN, MAIC
TITLE OF INVENTION: COMPOUND AND METHOD FOR THE PREVENTION AND/OR THE TREATMENT OF
FILE REFERENCE: 2002-0771/LC/01699
CURRENT APPLICATION NUMBER: US/10/237,656
CURRENT FILING DATE: 2002-09-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 5, Application US/10237656 Publication No. US20030152581A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQ ID NO 5
LENGTH: 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CURRENT APPLICATION NUMBER: US/10/237,656
CURRENT FILING DATE: 2002-09-10
PRIOR APPLICATION NUMBER: 09/362,731
PRIOR FILING DATE: 1999-07-29
NUMBER OF SEQ ID NOS: 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: SAINT-REMY, Jean-Marie
APPLICANT: JACQUEMIN, Marc
TITLE OF INVENTION: COMPOUND AND METHOD FOR THE PREVENTION AND/OR THE TREATMENT OF
FILE REFERENCE: 2002-0771/LC/01699
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Version 2.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                       TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCATION: (21)..(24)
OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTIDE
LOCATION: (25)..(33)
OTHER INFORMATION: Amino acid sequence 2-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   LOCATION: (33)..(33)
OTHER INFORMATION: Amidated glycine or glycinamide
NAME/KEY: PEPTIDE
LOCATION: (1)..(20)
OTHER INFORMATION: Amino acid sequence 378-398 of the Malari
OTHER INFORMATION: (Plasmodium falciparum) circumsporozoite
OTHER INFORMATION: (CSP) protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: MOD_RES
LOCATION: (33)..(
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OTHER INFORMATION: Amidated aspartic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: MOD_RES
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66.7%;
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Pred. No. 6.3e-05;
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Pred. No. 3
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.9e-05;
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                                                                                                                                                                                                                                                                                                                                                                        Length 32;
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RESULT 9
US-10-339-522-8
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US-09-943-548-8
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SOFTWARE: PatentIn version 3.1
SEQ ID NO 8
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SOFTWARE: PatentIn Version 2.1
SEQ ID NO 3
                                                                                                                                                                                     GENERAL INFORMATION:
                                                                                                                                                                                                    Sequence 8, Application US/10339522 Publication No. US20030108559A1
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                                                                     APPLICANT: Rittershaus, Charles W.
APPLICANT: Thomas, Lawrence J.
RIPLICANT: Thomas, Lawrence J.
TITLE OF INVENTION: MODULATION OF CHOLESTERYL ESTER TRANSFER PROTEIN (CETP) ACTIVI
FILE REFERENCE: TCS-411.1P US-3
CURRENT APPLICATION NUMBER: US/10/339,522
CURRENT FILING DATE: 2003-01-08
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TITLE OF INVENTION: MODULATION OF CHOLESTERYL ESTER TRANSFER PROTEIN (CETP) ACTIVI
FILE REFERENCE: TCS-411.1P US-1; Tcs-411.1P US-2
CURRENT APPLICATION NUMBER: US/09/943,548
CURRENT FILING DATE: 2001-08-30
PRIOR APPLICATION NUMBER: 08/432,483
PRIOR FILING DATE: 1995-05-01
PRIOR APPLICATION NUMBER: 08/432,483
PRIOR FILING DATE: 1995-05-01
PRIOR APPLICATION NUMBER: PCT/US96/06147
PRIOR FILING DATE: 1996-05-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION NUMBER: PCT/US96/06147
PRIOR FILING DATE: 1996-05-01
PRIOR APPLICATION NUMBER: 08/945,289
PRIOR FILING DATE: 1997-10-17
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 09/362,731 PRIOR FILING DATE: 1999-07-29
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TYPE: PRT
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16; Conserv
                                                                                                                                                                                                                                                                                                                                   1 QYIKANSKFIGITELGP
                                                                                                                                                                                                                                                                                                                                                                                         16; Conserv
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94.1%;
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Pred. No. 0.0002;
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Pred. No.
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0.00029;
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; OTHER INFORMATION: vaccine peptide of the invention US-10-339-522-8
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US-10-128-711-110
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SOFTWARE: Patentin version 3.1
SEQ ID NO 8
LENGTH: 50
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Best Local (
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PRIOR FILING DATE: 2001-08-30
PRIOR APPLICATION NUMBER: 09/943,548
PRIOR FILING DATE: 2001-08-30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: PRT
ORGANISM: Artificial Sequence
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                      INFORMATION FOR SEQ
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COMPUTER READABLE FORM:
MEDLUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PAttentin Release #1.0,
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: VITIELLO, Maria A.
CHESTNUT, Robert W.
SETTE, Alessandro D.
                                                      TELECOMMUNICATION INFORMATION: TELEPHONE: (206) 467-9600
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: Townsend and Townsend Khourie and Crew
STREET: Steuart Street Tower, One Market Plaza
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FILING DATE: 1997-10-17
SEQUENCE
                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                      PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION:
                                                                                                                                                                  APPLICATION NUMBER: US 07/935,811
FILING DATE: 26-AUG-1992
APPLICATION NUMBER: US 07/874,491
FILING DATE: 27-APR-1992
APPLICATION NUMBER: US 07/827,682
FILING DATE: 29-JAN-1992
APPLICATION NUMBER: US 07/749,568
FILING DATE: 26-AUG-1991
COMMET TENTONIALION
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16; Conserv
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FILING DATE: 22-Apr-2002
CLASSIFICATION: <Unknown>
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                                      TELEFAX: (206)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY: San Francisco
                                                                                            REFERENCE/DOCKET NUMBER: 14137-26-4
                                                                                                                    REGISTRATION NUMBER: 31,990
                                                                                                                                  NAME: Parmelee, Steven W.
                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/08/197,484 FILING DATE: 16-FEB-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Application US/10128711 pt. US20030099634A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OF SEQUENCES:
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CHARACTERISTICS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CELIS, Esteban
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                                        623-6793
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Pred. No.
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US-09-848-834A-20
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Best Local S
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                                                                   Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: Chimeric Peptide Immunogens FILE REFERENCE: 1102865-0047
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: 60/202,328 PRIOR FILING DATE: 2000-05-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Aphton Corporation
                                                                                                                                                                                                                                       OTHER INFORMATION: Amino acid sequence 378-398 of OTHER INFORMATION: circumsporozoite (CSP) protein NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                            LOCATION: (1)..(10)
OTHER INFORMATION:
NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                       LOCATION: (51)..(51)
OTHER INFORMATION: Amidated glycine or glycinamide
NAME/KBY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 OTHER INFORMATION: GnRH linked by a spacer to amino acid sequence 378-398 OTHER INFORMATION: ium falciparum circumsporozoite (CSP) protein
                                                                                                                                                   OTHER INFORMATION: Amino acid sequence 2-10 of the
                                                                                                                                                                     NAME/KEY: PEPTIDE LOCATION: (43)..(
                                                                                                                                                                                                     LOCATION: (37)..(42)
OTHER INFORMATION: Spacer peptide
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OTHER INFORMATION: Spacer peptide
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OTHER INFORMATION:
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MOLECULE TYPE: peptide
SEQUENCE DESCRIPTION: SEQ ID NO: 110:
26 KASSVFNVVNSSSGPSLHWSYGLRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4 KANSKF-IGITELGPSLHWSYGLRP 27
                                                                   16;
                                                                                 Similarity
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                                                                                                                                                                                                                                                                                                                                                                              Amino acid sequence 1-10 of the human GnRH hormone
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                                                                                   51.7%;
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Pred. No.
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; OTHER INFORMATION: vaccine peptide of the invention
US-10-339-522-2
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                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION NUMBER: PCT/US96/06147
PRIOR FILING DATE: 1996-05-01
PRIOR PPLICATION NUMBER: 08/945,289
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 09/943,334
PRIOR FILING DATE: 2001-08-30
PRIOR APPLICATION NUMBER: 09/943,548
PRIOR FILING DATE: 2001-08-30
PRIOR FILING DATE: 2001-08-30
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APPLICANT: Rittershaus, Charles W.
APPLICANT: Thomas, Lawrence J.
TITLE OF INVENTION: MODULATION OF CHOLESTERYL ESTER TRANSFER PROTEIN (CETP) ACTIVITY
FILE REFERENCE: TCS-411.1P US-1; Tcs-411.1P US-2
CURRENT FILING DATE: US/09/943,548
CURRENT FILING DATE: 2001-08-30
PRIOR APPLICATION NUMBER: 08/432,483
PRIOR APPLICATION NUMBER: 08/432,483
PRIOR FILING DATE: 1995-05-01
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                                                                             Matches
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Best Local :
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Best Local :
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                                                                                                                                                                                                                                                                          SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT FILING DATE: 2003-01-08
PRIOR APPLICATION NUMBER: 08/432,483
PRIOR FILING DATE: 1995-05-01
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: RITTERShaus, Charles W.
APPLICANT: Thomas, Lawrence J.
TITLE OF INVENTION: MODULATION OF CHOLESTERYL ESTER TRANSFER PROTEIN (CETP) ACTIVITY
FILE REFERENCE: TCS-411.1P US-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 9
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                                                                                                                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 9
SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CURRENT APPLICATION NUMBER: US/10/339,522
CURRENT FILING DATE: 2003-01-08
                                                                                                                                                                                                TYPE: PRT
ORGANISM: Artificial Sequence
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ORGANISM: Artificial Sequence
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Pred. No.
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Pred. No. 0.00024;
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Search completed: September 24, 2003, 17:33:07 Job time: 14.0388 secs
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US-09-785-215-4
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US-09-785-215-4
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Matches
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SOFTWARE: Patentin version 3.1
SEQ ID NO 4
LENGTH: 15
TYPE: PRT
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Best Local
                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                              APPLICANT: JENSEN, Martin Roland et al.
TITLE OF INVENTION: NOVEL METHOD FOR DOWN-REGULATION OF AMYLOID
FILE REFERENCE: 3631-0107P
CURRENT APPLICATION NUMBER: US/09/785,215
CURRENT FILING DATE: 2001-02-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     APPLICANT: Sudhir Paul
APPLICANT: Larry J. Smith
APPLICANT: Gennady Gololobov
APPLICANT: Gennady Gololobov
TITLE OF INVENTION: Methods for Identifying Inducers and Inhibitors of Proteolytic
TITLE OF INVENTION: Antibodies, Compositions and Their Uses
FILE REFERENCE: UNNC 63123 DIV
CURRENT APPLICATION NUMBER: US/09/862,849
CURRENT FILING DATE: 2001-08-29
PRIOR APPLICATION UNMBER: US 09/046,373
PRIOR FILING DATE: 1998-03-23
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length: 2000000000
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alpha-glucuronidas	hypothetical prote	hypothetical prote	conserved hypothet	probable transamin	hypothetical prote	FKBP-type peptidyl	peptidyl-prolyl ci	hypothetical prote	probable amidohydr	protein F14J16.10	phosphoenolpyruvat	pyruvate, water di	C4-dicarboxylate t	glucosamine-fructo	adenylate cyclase,	

ALIGNMENTS

A; Molecule type: DNA
A; Molecule type: DNA
A; Molecule type: DNA
A; Residues: 1-1315 <FAI>
A; Residues: 1-1315 <FAI>
A; Cross-references: GB: X06214; NID: g40773; PIDN: CAA29564.1; PID: g40774
A; Experimental source: strain CN3911
A; Experimental source: stra N;Alternate names: tetanus nourotoxin
C;Species: Clostridium tetani
C;Species: Clostridium tetani
C;Date: 31-Mar-1988 #seguence_revision 31-Mar-1988 #text_change 03-Jun-2002
C;Accession: A25699; A25757; A25194; B25194; A60759; S69348; S09364
R;Eisel, U.; Jarausch, W.; Goretzki, K.; Henschen, A.; Engels, J.; Weller, A;Title: Delineation of several DR-restricted tetanus toxin T cell epitopes. A;Reference number: JS0098; MUID:8903918; PMID:2463305
A;Reference number: JS0098; MUID:8903918; PMID:2463305
A;Contents: annotation; epitope region
R;Schiavo, G.; Benfenati, F.; Poulain, B.; Rossetto, O.; de Laureto, P.P.; DasGupta, Nature 359, 832-835, 1992
A;Title: Tetanus and botulinum-B neurotoxins block neurotransmitter release by protec A;Tetle: Tetanus and botulinum-B neurotoxins block neurotransmitter release by protec A;Tetle: Tetanus and botulinum-B neurotoxins block neurotransmitter release by protec A;Reference number: S27125; MUID:93063293; PMID:1331807 Infect. Immun. 57, 3588-3593, 1989
A;Title: Isolation, purification, and characterization of fragment B, the NH-2-termin A;Reference number: A60759; MUID:90035436; PMID:2478476
A;Accession: A60759 A;Cross-references: GB:X04436; NID:g40769; PIDN:CAA28033.1; PID:g40770 R;Fairweather, N.F.; Lyness, V.A. Nicheld Acids Res. 14, 7809-7812, 1986 Acids Res. 14, 7809-7812, 1986 A;Title: The complete nucleotide sequence of tetanus toxin. A;Reference number: A25757; MUID:87040747; PMID:3774547 A;Cross-references: GB:M12739; NID:g144920; PIDN:AAA23282.1; PID:g144921 A;Accession: B25194 A;Molecule type: protein A;Residues: 865-894 <FA3> R; Fairweather, N.F.; Lyness, V.A.; Pickard, D.J.; Allen, J. Bacteriol. 165, 21-27, 1986
A; Title: Cloning, nucleotide sequencing, and expression A; Reference number: A25194; MUID:86085672; PMID:3510187 A; Accession: A25194
A; Molecule type: DNA A; Residues: 743-1315 <FA2> A; Molecule type: protein A; Residues: 461-475 <MAT> R; Demotz, S; Lanzavecchia, L.; J. Immunol. 142, 394-402, 1989 R;Matsuda, M.; Lei, D.L.; Sugimoto, N.; Ozutsumi, K.; Okabe, Infect. Immun. 57, 3588-3593, 1989 A; Molecule type: DNA A; Residues: 1-1315 <EIS> A;Title: Tetanus toxin: primary structure, expression in E. coli, and homology with b A;Reference number: A25689; MUID:87053814; PMID:3536478
A;Accession: A25689 R; Eisel, U.; Jarausch, W.; EMBO J. 5, 2495-2502, 1986 A; Accession: A25757 tentoxilysin (EC 3.4.24.68) precursor - Clostridium tetani annotation Eisel, U.; Niemann, H.; Widmann, C.; Corradin, A.; Engels, J.; Weller, U.; Hudel, of tetanus toxin fragment C

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gonadoliberin precursor - mouse

W;Alternate names: gonadotropin-releasing hormone (GnRH); luteinizing hormone
N;Contains: gonadoliberin; gonadoliberin-associated protein (GAP)
C;Species: Mus musculus (house mouse)
C;Date: 31-Dec-1993 #sequence_revision 18-Mar-1997 #text_change 18-Jun-1999
C;Accession: A47578
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         gonadoliberin precursor - rhesus macaque (fragment)
N;Alternate names: luteinizing hormone releasing ho:
C;Species: Macaca mulatta (rhesus macaque)
C;Date: 02-Aug-1996 #sequence_revision 02-Aug-1996:
C;Accession: I78541
R;Ma, Y.J.; COSta, M.E.; Ojeda, S.R.
R;Ma, Y.J.; COSta, M.E.; Ojeda, S.R.
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A;Title: Developmental expression of the genes encoding A;Reference number: I58134; MUID:95124501; PMID:7545971 A;Accession: I78541
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F;461-315/Product: tentoxylysin heavy chain (fragment B.C) #status experimental <TTH>
F;461-864/Domain: channel forming (fragment B) #status predicted <TXB>
F;465-1315/Domain: ganglioside binding (fragment C) #status predicted <TXC>
F;233,237/Binding site: zinc (His) #status predicted
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A; Description: blocks neuroexocytosis via hydrolysis of a Gln-Phe peptide bond in C; Superfamily: tetanus toxin C; Superfamily: tetanus toxin C; Keywords: hydrolase; metalloproteinase; neurotoxin; transmembrane protein; zinc
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                                                                                   A; Accession:
                                                                                                                                 A; Title: A deletion truncating the gonadotropin-releasing hormone gene is responsible A; Reference number: A47578; MUID:87069928; PMID:3024317
                                                                                                                                                                                    R; Mason, A.J.; Hayflick, J.S.;
Science 234, 1366-1371, 1986
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                C; Superfamily:
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A; Residues: 2-31 <DEF>
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A;Relet.....
A;Accession: A90100
A;Accession: A90100
A;Molecule type: protein
A;Residues: 24-33 <TAN>
A;Residues: 24-33 <TAN>
A;Experimental source: placental trophoblasts
A;Experimental source: placental trophoblasts
R;Leibovitz, D.; Koch, Y.; Pitzer, F.; Fridkin, M.; Dantes, A.; Baumeau.
FEBS Lett. 346, 203-206, 1994
A;Title: Sequential degradation of the neuropeptide gonadotropin-releasing
A:Reference number: $45718; MUID:94283597; PMID:8013634
A:Reference number: $45718; MUID:94283597; PMID:8013634
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A;Residues: 1-15,'S',17-92 <SEE>
A;Cross-references: GB:X01059; NID:g34356;
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Nature 311, 666-668, 1984
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A; Residues: 1-92 < ADE>
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A; Residues: 1-92 <HAY>
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A; Molecule type: DNA
A; Residues: 1-90 <MAS>
A; Cross-references: EMBL:M14872; NID:g193576; PIDN:AAA37717.1; PID.
A; Cross-references: EMBL:M14872; NID:g193576; PIDN:AAA37717.1; PID.
C; Genetics:
A; Introns: 45/3; 77/3
C; Function: gonadoliberin stimulates pituitary secretion of lut
A; Note: gonadoliberin-associated protein may have prolactin releas
C; Superfamily: gonadoliberin
C; Keywords: amidated carboxyl end; hormone; hypothalamus; pyroglut
F; 1-23/Domain: signal sequence #status predicted <SIG>F; 22-31/Product: gonadoliberin #status predicted <GIB>F; 35-90/Product: gonadoliberin #status predicted (Gln) (in mature:
F; 31/Modified site: amidated carboxyl end (Gly) (amide in mature:
F; 31/Modified site: amidated carboxyl end (Gly) (amide in mature)
                                                                                                  Similarity
SQHWSYGLRP
                                       SLHWSYGLRP
                                                                                Conservative
30
                                       27
                                                                                                36.5%;
90.0%;
                                                                                0;
                                                                                                  Score 54;
Pred. No.
                                                                                   Mismatches
                                                                                                        0
                                                                                                                          DB 1;
                                                                                                .94;
                                                                                                                      Length 90;
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mature form) #s
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releasi

gonadoliberin precursor [validated] - human
y,Alternate names: gonadotropin releasing hormone (GnRH); luteinizing hormone
N;Contains: gonadoliberin-associated protein (GAP); progonadoliberin
C;Species: Homo sapiens (man)
C;Date: 17-Mar-1987 #sequence_revision 21-Jul-1995 #text_change 08-Dec-2000
C;Date: 17-Mar-1987 #sequence_revision 21-Jul-1995 #text_change 08-Dec-2000
C;Accession: S05308; A26173; A9342; A90108; A01410; S45718
R;Hayflick, J.S.; Adelman, J.P.; Seeburg, P.H.
Nucleic Acids Res. 17, 6403-6404, 1989

Nucleic Acids Res. 17, 6403-6404, 1989
A;Title: The complete nucleotide sequence of the human gonadotropin-releasing A;Reference number: S05308; MUID:89366682; PMID:2671939
A;Accession: S05308

hormone

translation not shown

PID: g31956

A;Cross-references: EMBL:X15215; NID:g31955; PIDN:CAA33285.1; R;Adelman, J.P.; Mason, A.J.; Hayfilck, J.S.; Seeburg, P.H. Proc. Natl. Acad. Sci. U.S.A. 83, 179-183, 1986 A;Title: Isolation of the gene and hypothalamic cDNA for the A;Reference number: A94090; MUID:86094338; PMID:2867548 A;Accession: A26173 common precursor of gona

A; Cross-references: GB:M12578; NID:g183418; PIDN: AAA35916.1; PID: 9386749

A; Experimental source: hypothalamus R; Seeburg, P.H.; Adelman, J.P.

A;Title: Characterization of cDNA for precursor of human A;Reference number: A93342; MUID:85012739; PMID:6090951 A;Accession: A93342 luteinizing hormone

releasin

PIDN: CAA25526.1;

PID: g34357

Biochem. Biophys. Res. Commun. 109, 1061-1071, 1982 A;Title: The Chemical identity of the immunoreactive LHI A;Reference number: A90108; MUID:83126573; PMID:6760865 A;Accession: A90108 LHRH-like peptide biosynthesized

Σ Amste

hormone γģ

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A; Cross-references: GB:M31670; NID:g204447; PIDN:AAA41264.1; PID:g204448
R; Adelman, J.P.; Mason, A.J.; Hayflick, J.S.; Seeburg, P.H.
Proc. Natl. Acad. Sci. U.S.A. 83, 179-183, 1986
A; Title: Isolation of the gene and hypothalamic cDNA for the common precursor A; Reference number: A94090; MUID:86094338; PMID:2867548
A; Accession: B26173
A; Molecule type: mRNA
A; Residues: 1-92 <ADE>
A; Cross-references: GB:M12579; NID:g204445; PIDN:AAA41263.1; PID:g204446
R; Maler, C.C.; Marchetti, B.; LeBoeuf, R.D.; Blalock, J.E.
Cell. Mol. Neurobiol. 12, 447-454, 1992
A; Title: Thymocytes express a mRNA that is identical to hypothalamic luteiniz A; Reference number: A48410; MUID:93105480; PMID:1468115
A; Reference number: A48410; MUID:93105480; PMID:1468115
A; Reference number: A8410; MUID:93105480; PMID:1468115
A; Reference number: A84810; MUID:93105480; PMID:1468115
A; Reference number: A88410; MUID:93105
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A;Gene: GDB:GNRH; LHRH; GRH
A;Cross-references: GDB:133746; OMIM:227200; OMIM:152760
A;Map position: 8p21-8p11.2
A;Introns: 47/3; 79/3
C;Function:
A;Note: gonadoliberin stimulates pituitary secretion of lutropin A;Note: gonadoliberin-associated protein may have prolactin release inhi C;Superfamily: gonadoliberin
C;Superfamily: gonadoliberin
C;Superfamily: signal sequence #status predicted <SIG>F;1-23/Domain: signal sequence #status predicted <FGN>F;24-92/Product: progonadoliberin #status experimental <AA7>F;31-92/Product: gonadoliberin-associated protein #status predicted <GAPF;24/Modified site: pyrrolidone carboxylc acid (Gln) (in mature form) #F;33/Modified site: amidated carboxyl end (Gly) (amide in mature form fr
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Pred. No.
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A;Reference number: A93780; MUID:72094314; PMID:4550508
A;Accession: A93780
A;Molecule type: protein
A;Rolecule type: protein
A;Residues: 1-10 <BUR>
A;Rosidues: 1-10 <BUR>
A;Note: the natural and synthetic hormones have the same biological activity
C;Comment: This hypothalamic hormone stimulates the secretion of both luteir
C;Superfamily: gonadoliberin
C;Superfamily: gonadoliberin
C;Superfamily: gonadoliberin
C;Keywords: amidated carboxyl end; hormone; hypothalamus; pyroglutamic acid
F;11/Modified site: pyrrolidone carboxylic acid (Gln) #status experimental
F;10/Modified site: amidated carboxyl end (Gly) #status experimental
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Biochem. Biophys. Res. Commun. 44, 459-463, 1971
A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing A; Title: Structure of the porcine LH- and ESH-releasing 
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A;Title: Primary structure of the ovine hypothalamic luteinizing hormone-releasing A;Reference number: A93780; MUID:72094314; PMID:4550508
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C;Species: Ovis orientalis aries, Ovis ammon aries
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Biochem. Biophys. Res. Commun. 45, 483-487, 1971
A;Title: On the tryptophan residue in porcine LH and FSH-releasing A;Reference number: A90175; MUID:72117544; PMID:4946275
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gonadoliberin precursor - African clawed frog
N;Alternate names: luteinizing hormone releasing hormone
C;Species: Xenopus laevis (African clawed frog)
C;Date: 13-Sep-1996 #sequence_revision 13-Sep-1996 #text_chang
C;Accession: I51423
C;Accession: Wray, S.; Battey, J.F.
Endocrinology 134, 1835-1845, 1994
A;Title: The frog GnRH-I gene has a mammalian-like expression
A;Reference number: I51423; MUID:94185563; PMID:8137750
                         RESULT
E98188
                                                                                                                                                                                                                                                                                                                                                                                                                                                 R;Wood, D.W.; Setubal, J.C.; Kaul, R.; Monks, D.; Chen, L.; erage, G.; Gillet, W.; Grant, C.; Guenthner, D.; Kutyavin, T.; Karp, P.; Romero, P.; Zhang, S. Science 294, 2317-2323, 2001
periplasmic nitrate
                                                                                           В
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                                                                                                                                                                                                                    A;Map position: linear chromosome C;Superfamily: Alcaligenes eutrophus nitrate
                                                                                                                                                                                                                                                                                      A;Cross-references: GB:AE008689; PIDN:AAL45202.1; PID:g17742881; GSPDB:GN00187 A;Experimental source: strain C58 (Dupont)
                                                                                                                                                                                                                                                                                                                                                     A,Title: The Genome of the Natural Genetic A;Reference number: AB2577; MUID:21608550; A;Accession: AD3098
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               periplasmic nitrate reductase large subunit [imported] - Agrobacterium tumefaciens C;Species: Agrobacterium tumefaciens C;Date: 11-Jan-2002 #sequence_revision 11-Jan-2002 #text_change 18-Nov-2002
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C;Superfamily: gonadoliberin
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                                                                                                                                                                                                                                                        A;Gene:
                                                                                                                                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 1-824 < KUR>
                                                                                                                                                                                                                                                                                                                                                                                                                        ster, E.W
                                                                                                                                                                                                                                                                                                                                                                                                                                      A; Authors: Yoo, H.; Tao,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     C; Accession: AD3098
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A; Residues: 1-89 <HAY>
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Best Local :
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8; Conserv
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          reductase
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                                                                                                                                                                        34.8%;
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100.0%;
        precursor napA (AF040988) [imported] - Agrobacterium
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); Mismatches
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Pred. No. 2
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Pred. No.
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T.; Levy, R.; Li,
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                                                                                                                                       submitted to the EMBL Data A: Reference number: $29980
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                                                                        A; Molecule type: mRNA
A; Residues: 1-244 <HOR>
                                                                                                       A;Status: preliminary
                                                                                                                      A; Reference number: A; Accession: $29982
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                                                                                                                                                                                                                                                                     RESULT 12
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A; Residues: 1-834 < KUR>
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Best Local :
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class II histocompatibility antigen - At C;Species: Salmo salar (Atlantic salmon) C;Date: 06-Tan-1995 #sequence_revision C;Accession: S29982
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     awa, H.; Takamiya, M.; Masuda, S.;
DNA Res. 6, 83-101, 1999
A;Title: Complete genome sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        C;Species: Agrobacterium tumefaciens
C;Date: 22-Oct-2001 #sequence_revision
C;Accession: E98188
R;Goodner, B; Hinkle, G.; Gattung, S.;
A.; Liu, F; Wollam, C.; Allinger, M.;
Science 294, 2323-2328, 2001
A;Cross-references: EMBL:X70166; NID:g64369; PID:g64370 C;Superfamily: class II histocompatibility antigen; immu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  probable fmu protein APE1098 - Aeropyru
C;Species: Aeropyrum pernix
C;Date: 20-Aug-1999 #sequence_revision
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Cross-references: DDBJ:AP000060; NID:g5104188; PIDN:BAA80083.1;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Map position: linear chromosome C; Superfamily: Alcaligenes eutrophus nitrate reductase A chain
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71.4%;
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Pred. No. 24;
9; Mismatches
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   immunoglobulin
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T.; Kudoh,
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ppas, C.;
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h, Y.; Yamazaki,
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Score 50.5;

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submitted to the EMBL Data Library, September 1997
A; Recession: T39087
A; States.
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hypothetical protein SPAC5D6.04 - fission yeast (Schizosaccharomyces pombe) C;Speciles: Schizosaccharomyces pombe C;Date: 03-Dec1999 #sequence_revision 03-Dec-1999 #text_change 03-Dec-1999 C;Accession: T38962
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A; Residues: 1-480 <STO>
A; Cross-references: GB: AE004556; GB: AE004091; NID: g9947194; PIDN: AAG04651.1; GSPDB: GN001
A; Experimental source: strain PAO1
C; Genetics:
A; Gene: PA1262
C; Superfamily: lincomycin-resistance protein lmrB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   R;Stover, C.K.; Pham, X.Q.; Erwin, A.L.; Mizoguchi, S.D.; Warrener, P.; Hickey, adman, S.; Yuan, Y.; Brody, L.L.; Coulter, S.N.; Folger, K.R.; Kas, A.; Larbig, LOTY, S.; Olson, M.V.
Nature 406, 959-964, 2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  probable MFS transporter PA1262 [imported] - Pseudomonas aeruginosa (strain PAO1) C;Species: Pseudomonas aeruginosa C;Date: 15-Sep-2000 #sequence_revision 15-Sep-2000 #text_change 31-Dec-2000
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A;Residues: 1-274 <GEN>
A;Residues: 1-274 <GEN>
A;Cross-references: EMBL:299532; PIDN:CAB16726.2; GSPDB:GN00066; SPDB:SPAC7D4.09c
A;Experimental source: strain 972h-; cosmid c7D4
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A;Accession: A83487
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R;Skelton, J; Churcher, C.M.; Wood, V.; Barrell, B.G.; Rajandream, M.A. submitted to the EMBL Data Library, July 1997
A;Reference number: Z21820
A;Accession: T38962
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Status: preliminary; translated from GB/EMBL/DDBJ
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A; Introns: 48/3; 92/2; 122/3
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A;Experimental source: strain 972h-; cosmid c5D6
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34, PubMed=2108021; Henschen A., Weller U. disulfide bridges and	14] SEQUENCE OF 742-1314 FROM N.A. SEQUENCE OF 742-1314 FROM N.A. PLASMID-75 Kbp; MEDLINE-86085672; PubMed-3510187 MEDLINE-86085672; PubMed-3510187 Fairweather N.F., Lyness V.A., F "Cloning, nucleotide sequencing, "Cloning, nucleotide sequencing, fragment C in Escherichia coli." J. Bacteriol. 165:21-27(1986). [5]	s / HubMedumer C., e of	n. primary structure of value toxins. 95-2502(1986). 4 N.A. 1. PLASMID=75 Kbp: 1747; PubMed=377454 N.F. Lyness V.A.; a nucleotide sequen s Res. 14:7809-7812	TETX OR CTP60. Clostridium tetani. Plasmid pE88, and Plasmid 75 Kbp. Plasmid pE88, and Plasmid 75 Kbp. Bacteria; Firmicutes; Clostridia; Cl Clostridium. NCBL_TaxID=1513; [1] SEQUENCE FROM N.A. PLASMID=75 Kbp; PLASMID=75 Kbp; PLASMID=75 Kbp; MEDLINE=87053814; PubMed=3536478; Eisel U., Jarausch W., Goretzki K., Weller U., Hudel M., Habermann F., N	TETX_CLOTE STANDARD; P04958; 13-AUG-1987 (Rel. 05, Cre 13-AUG-1987 (Rel. 42, Las 15-SEP-2003 (Rel. 42, Las Tetanus toxin precursor of the chain chain (Tetanus toxin chain)	185 193	256 293 293 459 664 1016 90 231
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EMBL; X06214; CAA29564.1; -.
EMBL; AF528097; AAO37454.1; -.
EMBL; M12739; AAA23282.1; -.
PIR; A25689; BTCLTN.
PDB; 1AF9; 29-APR-98.
PDB; 1DG0; 27-MAR-00.
PDB; 1DF0; 24-MAR-00.
PDB; 1DIW; 24-MAR-00.
PDB; 1DIW; 24-MAR-00.
PDB; 1DL; 24-MAR-00.
PDB; 1DL; 24-MAR-01.
INTERPOS; M27.001; -.
                                                                                                                                                                                                                                               use by non-profit institutions as long a modified and this statement is not removed. entities requires a license agreement (See lor send an email to license@isb-sib.ch).
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MEDLINE=92037649; PubMed=1935979;

Krieg1stein K.G., Henschen A.H., Weller U., Habermann E.;

"Limited proteolysis of tetanus toxin. Relation to activity and identification of cleavage sites.";

Eur. J. Biochem. 202:41-51(1991).
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MEDLINE-97475217; PubMed-9334741;
Umland T.C., Wingert L.M., Swaminathan S., Furey V
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"Tetanus toxin is a zinc proneurotransmitter release and EMBO J. 11:3577-3583(1992).
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MEDLINE=93010948; PubMed=1396558;
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MEDLINE=93010948; PubMed=1396558;
MEDLINE=93010948; PubMed=1396588;
MEDLINE=93010948; PubMed=1396888;
MEDLINE=930109488; PubMed=1396888;
MEDLINE=930109588; PubMed=1396888; PubMed=1396888;
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IDENTIFICATION OF SUBSTRATE
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FUNCTION: TETANUS TOXIN ACTS BY INHIBITING NEUROTRANSMITTER RELEASE. IT BINDS TO PERIPHERAL NEURONAL SYMAPSES, IS INTERNALIZED AND MOVES BY RETROGRADE TRANSPORT UP THE AXON INTO THE SPINAL CORD WHERE IT CAN MOVE BETWEEN POSTSYNAPTIC AND PRESYNAPTIC NEURONS. IT INHIBITS NEUROTRANSMITTER RELEASE BY ACTING AS A ZINC ENDOPERTIDASE THAT CAPALYZES THE HYDROLYSIS OF THE 76-GLN-[-PHE-77]
                                                                                                                                                                                                                                                                                                                                                                         GANGLIOSIDE RECEPTORS.
SIMILARITY: BELONGS TO PEPTIDASE FAMILY M27.
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COFACTOR: Binds 1 zinc ion per subunit (By similarity).

SUBUNIT: THE PRECURSOR POLYPEPTIDE IS SUBSEQUENTLY CLEAVED T
YIELD SUBCHAINS L AND H. THESE REMAIN LINKED BY A DISULFIDE
XIECD SUBCHAINS L AND H. THESE REMAIN LINKED BY A DISULFIDE
AND ARE NON-TOXIC AFTER SEPARATION.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BOND OF SYNAPTOBREVIN-2.
CATALYTIC ACTIVITY: Hydrolysis of 76-Gln-|-Phe-77 bond
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and protease activity depend on zinc.";
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PROSITE; PS00142; ZINC_PROTEASE; 1.
Reurotoxin; Transmembrane; Hydrolase; 3D-structure; Complete proteome.
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TETANUS TOXIN HEAVY CHAIN.
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RESULT
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28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
[Lutelnizing hormone-releasing hormone I) (Gonadotropin-releasing
hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
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MEDLING=95124501; PubMed-7545971;

Ma Y.J., Costa M.E., Ojeda S.R.;

"Developmental expression of the offactor alpha and its receptor in its company."
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GNRH1 OR GNRH OR LHRH.
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InterPro; 1PR002012;
InterPro; 1PR004079;
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-I- FUNCTION: STIMULATES THE SECRETION
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Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
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Pyrrolidone carboxylic acid.
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                                                                GONADOLIBERIN I.

GNRH-ASSOCIACED PEPTIDE I.

APPEARS TO BE ESSENTIAL FOR BIOLOGICAL

ACTIVITY (BY SIMILARITY).

PYRFOLLDONE CARBOXYLIC ACID (BY

SIMILARITY).

AMIDATION (G-16 PROVIDE AMIDE GROUP) (1
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Pred. No.
    505394DAA261A3F2 CRC64
                                               SIMILARITY).
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Best Local
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GON1_MOUSE
P13562;
01-JAN-1990
01-JAN-1990
28-FEB-2003
                                                                                                      PEPTIDE
PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                     "A deletion truncating the hpg mouse."; responsible for hypogonadism in the hpg mouse."; Science 234:1366-1371(1986).
-I- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT
                                                         MOD_RES
                                                                                                                                                                                                                                                                                                      between the Swiss Institute of Bloinformatics and the Inthe European Bioinformatics Institute. There are no rest use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an
                                                                                                                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mason A.J., Hayflick J.S., Zoeller R.T., Young W.S. Phillips H.S., Nikolics K., Seeburg P.H.; "A deletion truncating the gonadotropin-releasing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE FROM N.A. MEDLINE=87069928; PubMed=3024317;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-JAN-1990 (Rel. 13, Created)
01-JAN-1990 (Rel. 13, Last sequence update).
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GnRH I) (Luliberin I); Prolactin release-inhibiting factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GNRH1 OR GNRH
                                              SEQUENCE
                                                                                                                                                   Placenta;
                                                                                                                                                               Cleavage
                                                                                                                                                                            PROSITE;
                                                                                                                                                                                                 Pfam;
                                                                                                                                                                                                                                                       EMBL; M14872; AAA37717.1;
                                                                                                                                                                                                                                                                                or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                         entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=10090;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Eukaryota; Metazoa;
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erPro; IPR002012; (
erPro; IPR004079; (
erPro; IPR0446; GnRH; );
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Chordata; '
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21
90 PROGONADOLIBERIN
31 GONADOLIBERIN
90 PROLACTIN REL
24 APPEARS TO BE
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90.0%;
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Pred. No. 0.
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PROLACTIN RELEASE-INHIBITING
                                             AMIDATION (G-32 PI
1C0766FA4826E4D9
                                                                               ACTIVITY
                                                                    PYRROLIDONE CARBOXYLIC ACID
                                                                                           APPEARS TO BE ESSENTIAL
                                                                                                                            PROGONADOLIBERIN
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            . 28;
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Murinae; Mus
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SQHWSYGLRP

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Cleavage on pair .
Cleavage Signal; F
MOD_RES
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01-OCT-1996 (Rel. 34, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GNRH I) (Luliberin I); GNRH-associated peptide I).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               GON1_PIG P49921;
                                                          PEPTIDE
ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                   between the Swiss Institute of Bioinformatics and the EMBL outstation -
the European Bioinformatics Institute. There are no restrictions on its
use by non-profit institutions as long as its content is in no way
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or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDITIVE-12117544; PubMed-4946275; Baba Y., Arimura A., Schally A.V.; Baba Y., Arimura A., Schally A.V.; Baba T., Arimura A., Schally A., Arimura A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Matsuo H., Arimura
"Synthesis of the porcine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-72114303; PubMed-4946067;
Baba Y., Matsuo H., Schally A.V.;
"Structure of the porcine LH- and FSH-releasing hormone."
"Structure of the proposed structure by conventional so
                                                                                                                                                                                                                                                                                                                                                                                                                                                          This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE=72065376; PubMed=4942726; Matsuo H., Arimura A., Nair R.M.G., "Synthesis of the porcine LH- and F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE-Hypothalamus;
Weesner G.D., Matter
Submitted (MAY-1994)
                                                                                                                                                         SIGNAL
                                                                                                                                                                                                                                                    PRINTS; PR01541; GONADOLIBRNI.
                                                                                                                                                                                                                                                                               Pfam; PF00446; GnRH;
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Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-OCT-1996
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                                                                                                                                                                                                     PS00473; GNRH; 1. on pair of basic residues;
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                                                          23
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the EMBL/GenBank/DDBJ
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              ACTIVITY.
PYRROLIDONE
                                                        GNRH-ASSOCIATED PEPTIDE APPEARS TO BE ESSENTIAL
                                                                                                         PROGONADOLIBERIN GONADOLIBERIN I.
                                                                                                                                                                               carboxylic
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FOLLICLE-STIMULATING
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Best Local
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MEDILIND-86094338; PubMed-2867548;

Adelman J.P., Mason A.J., Hayflick J.S., Seeburg

"Isolation of the gene and hypothalamic cDNA for
of gonadotropin-releasing hormone and prolactin
factor in human and rat.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GON1_HUMAN P01148;
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SEQUENCE
Cargill M., Altshuler D. Shaw N., Lane C.R., Lim Friedland L., Rolfe A., Lander E.S.;
                                                                                                                                                                                                            MEDLINE-99318093; PubMed=10391209;
Cargill M., Altshuler D., Ireland J., Sklar
Shaw N., Lane C.R., Lim E.P., Kalyanaraman
Friedland L., Rolfe A., Warrington J., Lips
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-JUL-1986 (Rel. 01, Created)
01-APR-1988 (Rel. 07, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor (Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GnRH I) (Luliberin I) (Gonadorelin); GnRH-associated
                                                                                                                              Nat.
                                                                                                                                                          "Characterization
                                                                                                                                                                                                                                                                                                                                          biosynthesized in the human placenta. Biochem. Biophys. Res. Commun. 109:10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Seeburg P.H., Adelman J.P. "Characterization of cDNA releasing hormone.";
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MEDLINE-89356682; PubMed=2671939;

Hayflick J.S., Adelman J.P., Seebu

"The complete nucleotide sequence
hormone gene.";

Nucleic Acids Res. 17:6403-6403(19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   HUMAN
                                                                                       ERRATUM
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The chemical identi
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Nature 311:666-668(1984).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             releasing hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9606;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mammalia; Eutheria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Homo sapiens (Human)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GNRH1 OR GNRH OR LHRH.
                                                                                                                                                                                             ander E.S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      G
                                                                                                                              Genet.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Natl. Acad.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Similarity
9; Conser
                                                                                                                                                   genes
                                                                                                                                                                                                                                                                                                                                        Biophys.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SLHWSYGLRP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    91 AA;
                                       Altshuler D., Ireland J., Sklar P., Ardlie K., ne C.R., Lim E.P., Kalyanaraman N., Nemesh J.,
                                                                                                                              22:231-238(1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        \frac{\omega}{3}
                                                                                                                                                                                                                                                                                                                                                                                   identity of the immunoreactive LHRH-like
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                     of single-nucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PubMed=6090951;
                                                                                                                                                                                                                                                                                                                                                                                                                               PubMed=6760865;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sci. U.S.A. 83:179-183(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          17:6403-6403(1989)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Chordata;
Primates;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10090 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AND VARIANT SER-16
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90.0%;
                     Warrington
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uence of
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Pred.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Craniata; Vertebrata; Catarrhini; Hominidae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   precursor
                                                                                                                                                                                                                                                                                                                                            109:1061-1071(1982)
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                       J.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       54;
No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               P.H.
                                                                                                                                                                                                            Sklar P., Ardlie K., raman N., Nemesh J., ;, Lipshutz R., Daley (
                     Lipshutz
                                                                                                                                                                     polymorphisms
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0.28;
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                       R.,
                                                               Ardlie K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              r the common precursor release-inhibiting
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the common
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G.Q.,
                          G.Q.,
                                           Ziaugra
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                                                                                                                                                                                                                                                       Patil N.,
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Matches 9
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GO; GO:0005183; F:luteinizing hormone-releasing
GO; GO:0007267; P:cell-cell signaling; TAS.
GO; GO:0007267; P:cell-cell signaling; TAS.
GO; GO:0007265; P:negative regulation of cell progo; GO:0007165; P:signal transduction; TAS.
InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
Pfam; PF00446; GnRH; 1.
PRINTS; PR01541; GONADOLIBRNI.
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PIR; S05308; RHHUG.
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use by non-profit institutions as long as its content
modified and this statement is not removed. Usage by ar
       Rattus norvegicus (
Eukaryota; Metazoa;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE
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an email to license@isb-sib.ch).
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9; Conserv
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Pharmaceutical; Signal; Polymorphism;
ne carboxylic acid.

1 23
PROGONADOLIBERIN I.
37 92 GNNH-ASSOCIATED PEPT
26 26 26 APPEARS TO BE ESSENT
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zing hormone-releasing
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Pred. No. 0.29;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AMIDATION (G-34 PROVIDE W -> S (IN dbSNP:6185). /FTIG=VAR_013943. 30A72221B076FA79 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GNRH-ASSOCIATED PEPTIDE APPEARS TO BE ESSENTIAL
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   Craniata;
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       Vertebrata;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1;
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       Euteleostomi;
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FOR
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EMBL; S50870; AAB24572.1; -.
EMBL; M12570; AAAA1263.1; -.
EMBL; M15570; AAAA1264.1; -.
EMBL; M15527; AAA42141.1; ALT_SEQ.
EMBL; M15529; AAA42139.1; -.
EMBL; M15528; -, NOT_ANNOTATED_CDS.
PIR; A40147; RHRTG.
 MOD_RES
MOD_RES
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Science
                                                                                                                                                                    InterPro; IPR002012; GnRH. InterPro; IPR004079; Gonac Pfam; PF00446; GnRH; 1.
                                                                                                                                                                                                                                                                                                            use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE=87149087; PubMed=3547652; Adelman J.P., Bond C.T., Douglass
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            luteinizing
Cell. Mol. I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A. MEDLINE=89384661;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Adelman J.P., Mason A.J., Hayflick J.S., Seeburg "Isolation of the gene and hypothalamic cDNA for of gonadotropin releasing hormone and prolactin r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A. MEDLINE=86094338; PubMed=2867548;
                                                                                                      SIGNAL
                                                                                                                                Cleavage
                                                                                                                                             PROSITE;
                                                                                                                                                        PRINTS; PR01541;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DNA locus.";
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"Thymocytes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "The rat gonadotropin-releasing hormone: hypothalamic expression.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Bond C.T.,
                                                  ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-93105480; PubMed-1468115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NCBI_TaxID=10116;
[1]
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                                                                PEPTIDE
                                                                              PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Two mammalian genes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    factor in human and rat."
                                                                                                                                                                                                                                                                                                                                                                                                                          SUBCELLULAR LOCATION: Secreted TISSUE SPECIFICITY: CENTRAL NE
                                                                                                                                                                                                                                                                                                                                                                                                              SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                               FUNCTION: STIMULATES
THE SECRETION OF BOTH
                                                                                                                                                                                                                                                                                                                                                                                                                                                       HORMONES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Endocrinol. 3:1257-1262(1989).
                                        C.C., Marchetti B., Leboeuf R.D., Blalock J.E.; ocytes express a mRNA that is identical to hypothalamic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Natl.
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TION: STIMULATES THE
                                                                                                                                            PS00473;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g hormone-releasing hormone mRNA.";
Neurobiol. 12:447-454(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   384661; PubMed=2476669; Hayflick J.S., Seeburg
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Acad. Sci. U.S.A. 83:179-183(1986).
                                                                                                                                                        GONADOLIBRNI
                                                                                                                                                                                                                      NOT_ANNOTATED_CDS
                                                                                                                                          GNRH;
    10500
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                                                                                                                                                                                GonadoliberinI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 transcribed
    MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Douglass
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                                      APPEARS '
PYRROLIDONE CARBOXYLIC ACID AMIDATION (G-34 PROVIDE AMID 494B5C64DA8A3EB3 CRC64;
                                                                GONADOLIBERIN I.
PROLACTIN RELEASE-INHIBITING
                                                                                                                                                                                                                                                                                                                                                                                                                             NERVOUS
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nopposite
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OF
                                                                                                                                                                                                                                                                                                                                                                                                                            SYSTEM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SH locus: structure and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GONADOTROPINS; IT ST
FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                      . Usage by and for commercial http://www.isb-sib.ch/announce/
                                                     ESSENTIAL
                                                                                                                              Amidation;
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e strands
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 of
                                                                                                                              Hypothalamus;
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Query Match

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Query Match
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Matches
                                           MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                Burgus R., Butcher M., Amoss M., Ling N., Monahan M., Rivier J., Fellows R., Blackwell R., Vale W., Guillemin R.; Fellows Structure of the ovine hypothalamic luteinizing hormone-releasing factor (LRF) (LH-hypothalamus-LRF-gas chromatography-mass spectrometry-decapeptide-Edman degradation).":

Proc. Natl. Acad. Sci. U.S.A. 69:278-282(1972)
-1- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                 SEQUENCE
                                                                                                                                                                                                                                                                use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                        This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Ovis aries (Sheep).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrat
Mammalia; Eutheria; Cetartiodactyla; Ruminantia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GnRH I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Q28588;
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                                                                                           ACT_SITE
                                                                                                        PEPTIDE
                                                                                                                                                                                                                                                                                                               the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE OF 1-10. 
MEDLINE=72094314; PubMed=4550508;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STRAIN-Western range; TISSUE-Hypothalamus;
Rodriguez R.E., Wise M.E.;
Submitted (OCT-1993) to the EMBL/GenBank/DDBJ databases
                                                                                                                  PEPTIDE
                                                                                                                                          NON_TER
                                                                                                                                                                                                   InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
Pfam; PF00446; GnRH; 1.
                                                                                                                                                                                                                                        EMBL; U02517; AAA03433.1; -.
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                                                                                                                                                                   Cleavage
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Bovidae; Caprinae; Ovis.
                                                                                                                                                                                PROSITE;
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                                                                                                                                                                                          PR01541; GONADOLIBRNI.
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9; Conser
                                                                                                                                                                on pair of basic residues; Hormone; Amidation; Hypothalamus;
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                                                                                        GNRH-ASSOCIATED PEPTIDE APPEARS TO BE ESSENTIAL
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PYRROLIDONE
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                                                       AMIDATION
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RESULT 8
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Placenta;
NON_TER
                                                                                                                                                                 SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   EMBL; U91938; AAB51302.1; -.
InterPro; IPR0002012; GORH.
InterPro; IPR004079; GonadoliberinI.
Pfam; PF00446; GORH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     between the Swiss Institute of Bioinformatics and the Ethe European Bioinformatics Institute. There are no rest use by non-profit institutions as long as its content
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Jansen H.T., Stevens P.J., Zeitler P., Lehman M.N.;
Submitted (MAR-1997) to the EMBL/GenBank/DDBJ databases.
-i- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS;
THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMU
                                                                                                                                                                                  NON_TER
                                                                                                                                                                                                                           MOD_RES
                                                                                                                                                                                                                                                                    MOD_RES
                                                                                                                                                                                                                                                                                                           ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                 CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              entities requires a license agreement
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mesocricetus auratus (Golden hamster).
Eukaryota; Metazoa; Chordata; Craniata
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   009163;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GON1_MESAU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MESAU
                                                                                                                                                                                                                                                                                                                                                                         PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                           Cleavage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=10036;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mammalia;
                                                                                                                                                                                                                                                                                                                                                    PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mesocricetus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SUBCELLULAR LOCATION: Secreted. SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HORMONES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SWISS-PROT entry is copyright. It is produced through a collaboration
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PR01541; GONADOLIBRNI.
                                                                               Similarity
8; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HWSYGLRP 27
                                      HWSYGLRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                         on pair of basic residues; Hormone; Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HWSYGLRP
HWSYGLRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PS00473;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Pyrrolidone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Eutheria; Rodentia; Sciurognathi;
                                                                               Conservative
                                                                                                                                                                                    63
                                                                                                                                                                                                                             10
                                                                                                                                                                 AA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
9
                                        27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GNRH;
                                                                                                                                                                                                                                                                                                                                                                         >63
10
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                                                                                                                                                                 7370 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 100.0%;
                                                                                                                                                                                         63
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                                                                                                35.1%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                 carboxylic acid.
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                                                                                                     Score 52;
Pred. No
                                                                                                                                                                                                                                                                  APPEARS TO BE ESSENTIAL FOR BIOLOGICAL ACTIVITY (BY SIMILARITY).

PYRROLIDONE CARBOXYLIC ACID (BY
                                                                                                                                                               FC94995676F77180
                                                                                                                                                                                                                             AMIDATION
                                                                                                                                                                                                                                                   SIMILARITY)
                                                                                                                                                                                                                                                                                                                                SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                    GNRH-ASSOCIATED PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                       PROGONADOLIBERIN I. GONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No. 0.:
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                                      Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Craniata; Vertebrata; Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (See
                                                                                                                                                                                                                           (G-11 PROVIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0.38;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GONADOTROPINS; IT STIMULATES FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Muridae; Cricetinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Usage
                                                                                 0;
                                                                                                                                                                 CRC64;
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                                                                                                                      Length 63;
                                                                                 Indels
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RESULT ACCORDANCE RESULT OF SOLUTION OF SO
GON1_TUPGB
GON1_TUPGB
ID GON1_TUPGB STANDARD; PRT; 92 AA
AC 095335;
DT 15-DEC-1998 (Rel. 37, Created)
DT 15-DEC-1998 (Rel. 37, Last sequence update)
DT 28-FEB-2003 (Rel. 41, Last annotation update)
DE Progonadoliberin I precursor [Contains: Gon]
                                                                                                                                                                                                                                                                                                                              Ş
                                                                                                                                                                                                                                                                              밁
                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local
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Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus; Signal; Pyrrolidone carboxylic acid.

SIGNAL 1 23
CHAIN 24 89 PROGONADOLIBERIN I.

PEPTIDE 24 33 GONADOLIBERIN I.

PEPTIDE 37 89 GONADOTROPIN-RELEASING HORMONE ASSOCIATE PROFILE 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
GonadoLiberin I precursor (Gonadotropin-releasing (LH-RH) (Lullberin I).
Xenopus laevis (African clawed frog).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE-Forebrain;
MEDLINE-94185563; PubMed-8137750;
Hayes W.P., Wray S., Battey J.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi; Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae; Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   XENLA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PIR; 151423; 151423.
InterPro; IPR002012; GnRH
InterPro; IPR004079; Gonao
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   "The frog gonadotropin-releasing hormone-I (GnRH-I) gene has mammallan-like expression pattern and conserved domains in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00446; GnRH; 1.
PRINTS; PR01541; GONADOLIBRNI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       EMBL; L28040; AAA49728.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GnRH-associated peptide, but brain onset is delayed until
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE FROM N.A.
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    -!- SIMILARITY: Belongs to the GNRH family.

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                                                                                                                                                                                                                                                                                                                                                                                       Similarity
8; Conser
                                                                                                                                                                                                                                                                              HWSYGLRP
                                                                                                                                                                                                                                                                                                                                    HWSYGLRP 27
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                                                                                                                                                                                                                                                                                                                                                                                          Conservative
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24
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  . 41, Last annotation update)
I precursor [Contains: Gonadoliberin I (LH-RH)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10246 MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                35.1%;
100.0%
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                                                                                                                                                                                                                                                                                                                                                                                                                .0%;
                                                                                                                                                                                                                                                                                                                                                                                          0
                                                                                                                                                                                                                                                                                                                                                                                                                   Score 52;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PYRROLIDONE CARBOXYLIC ACID
AMIDATION (G-34 PROVIDE AMII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GNRH-ASSOCIATED PEPTIDE I (GAP).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   6F4F36FBAE0D4284 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
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0.56;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GROUP)
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
Schizosaccharomyces pombe (Fission yeast).

Bukaryota; Fund; Ascomycota; Schizosaccharomycetes;

Schizosaccharomycetales; Schizosaccharomycetaceae;

Schizosaccharomyces.
                                                       014197;
15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Hypothetical protein C5D6.04 in chromosome I.
SPAC5D6.04.
                                                                                                                                                                                                                                                                                                                                                                                                                      PEPTIDE
ACT_SITE
                                                                                                                                                           SCHPO
                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gen.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tupaia glis belangeri (Common tree shrew).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata
Mammalia; Eutheria; Scandentia; Tupaiidae; Tupaia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I]. GNRH1 OR GNRH.
                                                                                                                                                                                                                                                                                                                                                              MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                           MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                  PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Placenta;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cleavage on
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              EMBL; U63326; AAB16837.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             This
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             placental mammal."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Characterization of two new preproGnRH first direct evidence for mesencephalic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=Hypothalamus;
MEDLINE=97079639; PubMed=8921350;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A
                                                                                                                                              YDQ4_SCHPO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -!- FUNCTION: STIMULATES THE SECRETION OF THE SECRETION OF BOTH LUTEINIZING AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fernald R.D.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Kasten T.L., White S.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=9396;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUBCELLULAR LOCATION: Secreted. SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  rPro; IPR002012; G
rPro; IPR004079; G
r; PF00446; GnRH; 1
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                                                                                                                                                                                                                                               20 HWSYGLRP
                                                                                                                                                                                                                                                                                                                                                                                                                    e on pair of basic residues; Hormone; Ar
a; Signal; Pyrrolidone carboxylic acid.
a; Signal; Pyrrolidone carboxylic acid.
BY SIMILARITY.
24 92 PROGONADOLIBERIN:
24 33 GONADOLIBERIN:
24 33 GONADOLIBERIN I
25 ONRH-AASSOCIATED PI
26 26 APPEARS TO BE ESSI
                                                                                                                                                                                                                                                                                         Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Endocrinol. 104:7-19(1996)
                                                                                                                                                                                                                                                                                                                                   92 AA;
                                                                                                                                                                                                                                                                            Conservative
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                                                                                                                                              STANDARD;
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                                                                                                                                                                                                                                                                                                                                   10197
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100.0%;
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                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                      Score 52;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                             PYRROLIDONE CARBOXYLIC ACID (BY SIMILARITY).
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GNRH-ASSOCIATED PEPTIDE
APPEARS TO BE ESSENTIAL
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                                                                                                                                                                                                                                                                                                                                   4FDBF2C58CF5F63B CRC64;
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                                                                                                                                                                                                                                                                            Mismatches
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0.58;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       mRNAs in the tree shrew
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                                                                                                                                              AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               acid.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           gene expression
                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                                                                                                    Length 92;
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RA Mooney P., Moule S., Mungall K., Murphy L., Niblett D., Odell C.,
RA Moliver K., O'Neil S., Pearson D., Quail M.A., Rabbinowitsch E.,
RA Oliver K., O'Neil S., Pearson D., Ouail M.A., Rabbinowitsch E.,
RA Rutherford K., Rutter S., Saunders D., Seeger K., Sharp S.,
RA Kelton J., Simmonds M., Squares R., Squares S., Stevens K.,
RA Raylor K., Taylor R.G., Tivey A., Walsh S.V., Warren T., Whitehead S.,
RA Woodward J., Volckaert G., Aert R., Robben J., Grymonprez B.,
RA Weltjens I., Vanstreels E., Rieger M., Schaefer M., Mueller-Auer S.,
RA Woodward J., Volckaert G., Aert R., Robben J., Grymonprez B.,
RA Woodward J., Vanstreels E., Rieger M., Schaefer M., Mueller-Auer S.,
RA Woodward J., Vanstreels E., Rieger M., Schaefer M., Mueller-Auer S.,
RA Gabel C., Fuchs M., Fritzc C., Holzer E., Moestl D., Hilbert H.,
RA Borzym K., Langer I., Beck A., Lehrach H., Reinhardt R., Pohl T.M.,
RA Borzym K., Langer I., Beck A., Lehrach H., Reinhardt R., Pohl T.M.,
RA Bger P., Zimmermann W., Wedler H., Wambutt R., Purnelle B.,
RA Goffeau A., Cadieu E., Dreano S., Glava S., Lelaure V., Mottier S.,
RA Goffeau A., Cadieu E., Dreano S., Glava S., Lelaure V., Mottier S.,
RA Galibert F., Aves S.J., Xiang Z., Hunt C., Moore K., Hurst S.M.,
Lucas M., Rochet M., Gallardin C., Tallada V.A., Garzon A., Thode G.,
RA Lucas M., Rochet M., Gallardin C., Tallada V.A., Garzon A., Thode G.,
RA Daga R.R., Cruzado L., Jimenez J., Sanchez M., del Rey F., Benito J.,
RA Shpakovski G.V., Ussery D., Barrell B.G., Nurse P.,
"The genome sequence of Schizosaccharomyces pombe.";

Nature 415:871-880(2002).
                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 8
  HMCT_BOMMO
P98092;
01-FEB-1996
01-FEB-1996
15-SEP-2003
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Wood V., Gwilliam R., Rajandream M.A., Lyne M., Lyne R., Stewart A. Sgouros J., Peat N., Hayles J., Baker S., Basham D., Bowman S., Brooks K., Brown D., Brown S., Chillingworth T., Churcher C.M., Collins M., Connor R., Cronin A., Davis P., Feltwell T., Fraser A., Gentles S., Goble A., Hamlin N., Harris D., Hidalgo J., Hodgson G., Holloyd S., Hornsby T., Howarth S., Huckle E.J., Hunt S., Jagels K., James K., Tones I., Tones M. Teather S. McDonald S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hypothetical TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Pfam;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GeneDB_SPombe;
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Pfam; PF03547; Auxin_eff; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   T38962; T38962
                                                                                                                                                                                                                                                              13 TELGPSLHWSYGLR 26
                                                                                                                                                                                                                                                                                                              Similarity
8; Conser
                                                                                                                                                                                                                SQLGQALRWSYGYR 179
(Rel. 33, Created)
(Rel. 33, Last sequence update)
(Rel. 42, Last annotation updat
                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      protein;
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                                                                                                  STANDARD;
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LOCATION: Integral membrane protein (Potential).
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71B77EA5725C69A8 CRC64;
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                                                                                                  3133
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                                                                                                                                                                                                                                                                                                           Indels
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.., Thode G.,
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InterPro; IPR006207; Cys_knot_C.
InterPro; IPR006207; FA58_C.
InterPro; IPR000421; FA58_C.
InterPro; IPR0022172; LDL_receptor_A.
InterPro; IPR002219; TIL_Cysrich.
InterPro; IPR001007; VWE_C.
InterPro; IPR001007; VWE_C.
InterPro; IPR001046; VWF_D.
Pfam; PF00754; F5_F8_type_C; 2.
Pfam; PF001826; TIL; 6.
Pfam; PF01826; TIL; 6.
Pfam; PF00184; VWG; 3.
SMART; SM00041; CT; 1.
SMART; SM00216; VWD; 3.
SMART; SM00192; LDLa; 1.
SMART; SM00192; LDLa; 1.
SMART; SM00192; LDLa; 1.
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DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            EMBL; D29738; BAA06160.1; -. EMBL; D14035; BAA03124.1; -. PIR; S52093; S52093.
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-!- SIMILARITY: TO MAMMALIAN VON WILLEBRAND FACTOR
-!- SIMILARITY: THE N-TERMINAL DOMAIN SHOWS SOME S
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Neoptera; Endopterygota; Lepidoptera; Glossata; Ditrysia; Bombycoidea;
Bombycidae; Bombyx.
                                                     CHAIN
                                                                                  SIGNAL
                                                                                                                                  PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -!- PTM: MAY BE CONVERTED INTO THE 260 kDa MATURE HEMOCYTIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -!- INDUCTION: HEMAGGLUTINATION ACTIVITY IS INCREASED BY BACTERIAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  -!- DEVELOPMENTAL STAGE: EXPRESSED IN HEMOCYTES METAMORPHOSIS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     -!- FUNCTION: ADHESIVE PROTEIN AND RELATES TO HEMOSTASIS ENCAPSULATION OF FOREIGN SUBSTANCES FOR SELF-DEFENSE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Submitted (JAN-1993) to the EMBL/GenBank/DDBJ databases
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Matsubara F., Yamakawa M.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Biochim.
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Matsubara F., Taniai K., Kadono-Okuda K., Kato Y.,
"Cloning and expression of the gene of hemocytin, a
lectin which is homologous with the mammalian von W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Kotani E., Yamakawa M., Iwamoto S.-I.,
Matsubara F., Taniai K., Kadono-Okuda r
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            STRAIN=Fuyou X Tokai; TISSUE=Hemocyte;
MEDLINE=95178544; PubMed=7873598;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Hemocytin precursor (Humoral lectin).
Bombyx mori (Silk moth).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE OF 2221-3133 FROM N.A.
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SIMILARITY: Contains 2 F5/8 type C domains.

SIMILARITY: Contains 2 VWFC domains.

SIMILARITY: Contains 1 C-terminal cystine knot-like (CTCK) domain.
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                                                                                                  Glycoprotein;
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PS01285;
PS01286;
PS50022;
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                             ; FA.; ; EA.; ; EA.; ; FA58C_2; 2.
22; FA58C_3; 2.
208; VWFC_1; FALSE_NEG.
208; VWFC_1; FALSE_NEG.
POTENTIAL.
POTENTIAL.
PEMOCYTIN.
                                                                                                                                                     CTCK_1; 1.
CTCK_2; 1.
FA58C_1; 2.
FA58C_2; 2.
FA58C_3; 2.
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Mori H.;
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01-FEB-1991 (Rel. 17, Created)
01-FEB-1991 (Rel. 17, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
26-FEB-3003 (Rel. 41, Last annotation update)
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054713;
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15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor (Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing
(Luteinizing hormone I) (Gonadotropin-releasing
(Luteinizing hormone I) (Gonadotropin-releasing
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                                                     This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation - the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                      Endocrinology 138:4123-4130(1997).
-I- FUNCTION: STIMULATES THE SECRETION OF THE SECRETION OF BOTH LUTEINIZING AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STRAIN-Hartley white; TISSUE-Hypothalamus; MEDLINE-97462693; PubMed-9322920; Jimenez-Linan M., Rubin B.S., King J.C.; "Examination of guinea pig luteinizing hor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cavia porcellus (Guinea pig).
Eŭkaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Hystricognathi; Caviidae; Cavia.
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InterPro; IPR002012; GnRH.
Pfam; PF00446; GnRH; 1.
PROSITE; PS00473; GNRH; 1.
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-i- FUNCTION: Stimulates the secretion of gonadotropins.

-i- SUBCELLULAR LOCATION: Secreted.
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MEDLINE=91352338;
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Archosauria; Crocodylidae; Alligatorinae; Alligator.
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J. Rica
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MEDLINE-82265778; PubMe
King J.A., Millar R.P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-94059355; PubMed-7902095; Dunn I.C., Chen Y., Hook C., Shar "Characterization of the chicken
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE FROM N.A.
STRAIN-White leghorn;
                                                              "Structure of chicken h
                                                                                                  SYNTHESIS OF 24-33.
MEDLINE-82265777; F
                                                                                                                                                        King J.A., Millar R.P.;
"Structure of avian hypothalamic gonadotrophin-releasing hormone.";
S. Afr. J. Sci. 78:124-125(1982).
                                                                                                                                                                                                               TISSUE=Hypothalamus;
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                                                                                                                                                                                                                                                                    "Structure of chicken hypothalamic luteinizing hormone. II. Isolation and characterization."; J. Biol. Chem. 257:10729-10732(1982).
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GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR
ACTIVITY (BY SIMILARITY).
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                                                                                                                                   SEQUENCE
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AMIDATION (G-34 PROVIDE AMIDE GROUP).
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GNRH-ASSOCIATED PEPTIDE
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                                                                                                                                                                                              Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          September 24, 2003, 17:29:11; Search time 27.1468 Seconds (without alignments) 266.163 Million cell updates/sec
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       BLOSUM62
  Query
                                                                                                                                                                                                                                                                                                                                              10:
11:
12:
13:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SPTREMBL_23:*
1: sp_archea:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Maximum Match
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Copyright (c) 1993 - 2003 Compugen
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                                                                                                                                                                                                                                                                                                                                                                                         sp_phage:*
                                                                                                                                                                                                                                                                                                                                                                                                    sp_organelle:*
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                                                                                                                                                                                                                                                                                                                                                                                                                                      sp_invertebrate: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       sp_bacteria:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                            sp_fung1:*
                                                                                                                                                                                                                                                                                                                    sp_unclassified:*
sp_rvirus:*
                                                                                                                                                                                                                                                                                                                                                                  sp_plant:*
sp_rodent:*
                                                                                                                                                                                                                                                                                                                                                      sp_virus:*
                                                                                                                                                                                                                                                                                                          sp_bacteriap:*
                                                                                                                                                                                                                                                                                                                                           sp_vertebrate:*
                                                                                                                                                                                             Length DB
                                                                              12
16
17
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             3 Q90Y63
Q9PRHO
2 Q8BAZ8
Q95YY3
5 Q8U7P1
077072
7 Q9YD14
Q8N8Z6
Q8IYK5
Q31585
Q95IS2
Q95IS2
                                                                                                                                                            Q93N27
5 Q98FZ0
                                                                                                                                                                                             IJ
                                                                                                                                                                                                                              SUMMARIES
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                                                                             Q93n27 clostridium
Q98fz0 rhizobium 1
Q90y63 rana catesb
Q9prh0 anguilla ja
Q8baz8 hepatitis b
Q95vy3 lumbricus t
Q807y1 agrobacteri
Q77072 eisenia foe
Q9yd14 aeropyrum p
 Q8n8z6
Q8iyk5
Q31585
Q3rj9
Q9xrj9
Q95is2
Q95hy1
Q95hx4
                                                                                                                                                                                            Description
6 homo sapien
5 homo sapien
5 salmo salar
9 salvelinus
2 salmo salar
1 salmo salar
1 salmo salar
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ALIGNMENTS

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RESULT 1
Q93N27
ID Q93N27
Q93N
AC Q93N
DT 01-1
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Best Local
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Q93N27;
Q9-NEC-2001 (TrEMBLrel. 19, C:
01-DEC-2001 (TrEMBLrel. 19, L;
01-MAR-2003 (TrEMBLrel. 23, L;
Tetanus toxin (Fragment).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Shumin Z., Dianliang L.;
"Cloning and sequence analysis of tetanus toxin gene.";
submitted (JUN-2001) to the EMBL/GenBank/DDBJ databases.
EMBL; AF389424; AAK72964.2; -.
InterPro; IPR0010395; Bontoxilysin.
InterPro; IPR001064; Crystallin.
InterPro; IPR001064; Crystallin.
InterPro; IPR001065; Zn_MTpeptdse.
Pfam; PF01742; Peptidase_MZ7; 1.
                                                                                                                                                                                                                                                                                                PRINTS; PRO0760; BONTOXILYSIN.

PROD01963; BONTOXILYSIN; 1.

PROSITE; PS00025; CRYSTALLIN_BERAGAMMA; 1.

PROSITE; PS00142; ZINC_PROTEASE; 1.

NON_TER 1 1 1 1

NON_TER 1310 AA; 150316 MW; 9EADDC9144
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Clostridium tetani.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Clostridium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=1513;
                                        1 QYIKANSKFIGITEL 15
                                                                                                                                                    15;
                                                                                                                                                                                        Similarity
                                                                                                                                                    Conservative
                                                                                                                                                                                        50.0%;
                                                                                                                                                                                                                                                                                                    150316 MW; 9EADDC914418E450 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Created)
Last sequence update)
Last annotation update)
                                                                                                                                                    0;
                                                                                                                                                                                        Score 74; DB 2; Length 1310; Pred. No. 0.021;
                                                                                                                                                    Mismatches
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RESULT
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Q990XILT
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D1 011
D2 PH
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COC EN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q90Y63;
01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Progonadoliberin I precursor (Contains: Gonadoliberin I (LHRH I)
(Luteinizing hormone releasing hormone I) (Gonadotropin releasing
(Luteinizing hormone (Luliberin I); GnRH-associated peptide I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE-Forebrain;
MEDLINE-21102951; PubMed-11170016;
MEDLINE-21102951; Rang H.M., Im W.B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Kaneko T., Nakamura Y., Sato S., Asamizu E., K
Watanaba A., Idesawa K., Ishikawa A., Kawashim
Kishida Y., Kiyokawa C., Kohara M., Matsumoto
Mochizuki Y., Nakayama S., Nakazaki N., Shimpo
Takeuchi C., Yamada M., Tabata S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                            "Cloning and characterization of cDNAs encoding precursors from bullfrog (Rana catesbeiana).";
J. Exp. Zool. 289:190-201(2001).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Rhizobium loti (Mesorhizobium loti).
Bacteria; Proteobacteria; Alphaproteobacteria;
Phyllobacteriaceae; Mesorhizobium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Eukaryota; Metazoa; Chordata; Craniata; Ve
Amphibia; Batrachia; Anura; Neobatrachia;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Rana catesbeiana (Bull frog).
Eukaryota; Metazoa; Chordata;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Hypothetical SEQUENCE 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STRAIN=MAFF303099;
MEDLINE=21082930; PubMed=11214968;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Phyllobacteriaceae;
NCBI_TaxID=381;
                                                                                                    EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q90Y63
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                      InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=8400;
SUBCELLULAR LOCATION: SECRETED.
TISSUE SPECIFICITY: FOREBRAIN.
DEVELOPMENTAL STAGE: EXPRESSED AT SIGNIFICANTLY HIGHER
DURING POST-BREEDING. NOT EXPRESSED IN PITUITARY.
SIMILARITY: BELONGS TO THE GNRH FAMILY.
L; AF188754; AALO5972.1; -.
erPro; IPR002012; GnRH.
erPro; IPR004079; GonadoliberinI.
                                                                                                                                                                                                                                                                                                                                                              SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                            FUNCTION: STIMULATES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Res
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AP003002; BAB50426.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OR GNRH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 QYIKANSKFIGITELGPSLHWSYG 24 :::|| | | | | | | | |
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
9; Conser
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                                                                                                                                                                                                                                                                                                                                                                                                            THE SECRETION
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Pred. No. 9.7;
7; Mismatches
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99597D57D25D11A1 CRC64;
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a; Ranoidea;
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Ranidae; Rana
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3 M.,
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Matches
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PROSITE: PSO0473; GNRH; 1.
Cleavage on pair of basic residu
Pyrrolidone carboxylic acid.
SIGNAL 1 24 POT
CHAIN 25 90 PRO
PEPTIDE 25 34 GON
PEPTIDE 38 86 GNR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OpprHO;
01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-CT-2000 (TrEMBLrel. 22, Last annotation update)
01-CCT-2002 (TrEMBLrel. 22, Last annotation update)
Prepro-mGnRH precursor (Gonadoliberin) (Gonadotropin-releasing hormone) (LH-RH) (Luliberin).
Anguilla japonica (Japanese eel).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostor
                                                                                                                                                                  PRINTS; PR01541; GONADOLIBRNI. PROSITE; PS00473; GNRH; 1. Amidation; Hormone; Signal.
                                                                                                                                                                                                                                                                                                     EMBL; AB026989; BAA82608.1; -. EMBL; AB026991; BAA83597.1; -.
                                                                                                                                                                                                                                                                                                                                             SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                            Okubo K., Suetake H., Aida K.;
"A splicing variant for the prepro-mammalian hormone (prepro-mGnRH) mRNA is present in the peripheral tissues of the Japanese eel.";
Zool. Sci. 16:645-651(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Expression of two gonadotropin-releasing genes in various tissues of the Japanese e Zool. Sci. 16:471-478(1999).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Actinopterygii; Neopterygii; Anguilla.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Q9PRH0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MOD_RES
                                                                                                                              CHAIN
                                                                                                                                                  SIGNAL
                                                                                                                                                                                                                                     Pfam; PF00446; GnRH;
                                                                                                                                                                                                                                                           InterPro; IPR002012; GnRH
InterPro; IPR004079; Gona
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Okubo K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                          -!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NCBI_TaxID=7937;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PF00446; GnRH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                    Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             HWSYGLRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     HWSYGLRP
                                                                                                                                                                                                                                                           IPR004079; GonadoliberinI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Suetake H.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    90 AA;
  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             33
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NRH; 1.
basic residues;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  25
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                      100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Aida K.;
                                                                                    MW;
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                0;
                 Score 52;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 52; DB Pred. No. 2.5 0; Mismatches
                                                                           MGNRH.
GNRH ASSOCIATED PEPTIDE
BA15C9DC08434A7B CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; Craniata;
Teleostei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (BY SIMILARITY).
AMIDATION (G-35 PROVIDE AMIDE GROUP)
(BY SIMILARITY).
317203B4E3DA2FE7 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (BY SIMILARITY).
PYRROLIDONE CARBOXYLIC ACID
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PROGONADOLIBERIN I.
GONADOLIBERIN I.
GNRH-ASSOCIATED PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                                                                                                                                                                                                                                                                                                GNRH
  Mismatches
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No.
                                                                                                                                                                                                                                                                                                                                                FAMILY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Hormone;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     91
                      DB 13;
2.6;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Vertebrata; Euteleostomi;
Anguilliformes; Anguillidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DВ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     eel and evolution
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                                                                                                                                                                                                                                                                                                                                                                                                                                                    gonadotropin-releasing
e brain and various
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                                        Length
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  Indels
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                                          91;
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on of GnRH.";
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  Gaps
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Best Local
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Best Local
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01-MAR-2003
01-MAR-2003
01-MAR-2003
                                                                                                                                                                                                           Q95VY3;
01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
                                                                           Signal.
SIGNAL
                                                                                              Q95VY3
                                                                                                                                                                                                                                                                                                                                                            Basuni A.A., Bowden R.J., Butterworth L.-A., Cooksley G Locarnini S., Carman W.F.; Corman W.F.; Carman W.G., Carman W.F.; Submitted (JUN-2002) to the EMBL/GenBank/DDBJ databases EMBL; AY122488; AAM82819.1; SEQUENCE 226 AA; 25414 MW; 63791C8CAEFFB514 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Surface antigen.
Hepatitis B virus.
Viruses; Retroid viruses;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Q8BAZ8
                                                                                                                                                                             Lumbricus terrestris (Common earthworm)
Eukaryota; Metazoa; Annelida; Clitellat
Lumbricina; Lumbricidae; Lumbricus.
                                                                   SEQUENCE
                                                                                                                                                                                                       Coelomic cytolytic
                                                                                                                                                                                                                                                                                                                                                                                                                                        "Hepatitis B virus variability and human population history pacific.";
                                                                                          Pfam; PF00722; Glyco_hydro_16;
                                                                                                                                                     SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                Submitted (OCT-2002)
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Bowden R.J.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                     NCBI_TaxID=6398;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NCBI_TaxID=10407;
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196
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                6
                                 Similarity 7; Conserv
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SGEFLGIQKMGSTMHWGPG 214
                NSKFIGITELGPSLHWSYG
                                                                                                                                                                                                                                                                                           ASVRFSWLSSLAPFVHWFVGLSP 188
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                                                                   382
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (TrEMBLrel.
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                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                                                                                                                                                                                                                             Conservative
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                                 Conservative
                                                                   A,
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                                                                                                                                                                                                      factor precursor.
                                                                   43931 MW;
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                                        35.1%;
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                              7;
                                       Score 52;
Pred. No.
                                                                                                                                                                                                                                                                                                                            5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Last sequence up
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               24
                                                                                                                                                                                                                                                                                                                                     Score 52;
Pred. No.
                                                                 POTENTIAL. 5256CF171EB7D3FB CRC64;
                                                                                                                                                                                      Clitellata;
                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRT;
                                 Mismatches
                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                 382
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                                         DB
13;
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                                                                                                                                                                                      Oligochaeta;
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                                                                                                                                                                                                                                                                                                                                             12;
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                                                Length 382;
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                                 Indels
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O77072; 01-NOV-1998 (TrEMBLrel. 01-NOV-1998 (TrEMBLrel.

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Created)

Last sequence update)

077072

PRELIMINARY;

PRT;

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RESULT
077072
ID 07
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Best Local S
Matches 10
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01-JUN-2002 (
01-JUN-2002 (
01-MAR-2003 (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Goodner B., Hinkle G., Gattung S., Miller N., Blanchard M., Gurollo B., Goldman B.S., Cao Y., Askenazi M., Halling C., Mullin L., Houmiel K., Gordon J., Vaudin M., Iartchouk O., Epp A., Liu F., Wollam C., Allinger M., Doughty D., Scott C., Lappas C., Markelz B., Flanagan C., Crowell C., Gurson J., Lomo C., Sear C., Strub G.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-21608550; PubMed-11743193;
Wood D.W., Setubal J.C., Kaul R., Monks D.E., Kitajima J.P.,
Wood D.W., Zhou Y., Chen L., Wood G.E., Almeida N.F. Jr., Woo I
Okura V.K., Zhou Y., Chen L., Wood G.E., Almeida N.F. Jr., Woo I
Chen Y., Paulsen I.T., Eisen J.A., Karp P.D., Bovee D. Sr.,
Chapman P., Clendenning J., Deatherage G., Gillet W., Grant C.,
Kutyavin T., Levy R., Li M.-J., McClelland E., Palmieri A.,
Kutyavin T., Levy R., Li M.-J., McClelland E., Romero P., Gordo
Raymond C., Rouse G., Saenphimmench C., Wu Z., Romero P., Gordo
Zhang S., Yoo H., Tao Y., Biddle P., Jung M., Krespan W., Perry
Gordon-Kamm B., Liao L., Kim S., Hendrick C., Zhao Z.-Y., Dolan
Chumley F., Tingey S.V., Tomb J.-F., Gordon M.P., Olson M.V.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Q8U7P1
                                                                                                                                                                                                                                                              PROSITE; PS00551; Complete proteome.
                                                                                                                                                                                                                                                                                                                           Pfam; PF00384; Pfam; PF04879;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Science 294:2323-2328(2001).
EMBL; AE009369; AAL45202.1; ALT_INIT.
EMBL; AE008245; AAK89031.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Wollam C., Allinger M., Doughty D., Scott C., Flanagan C., Crowell C., Gurson J., Lomo C., Cielo C., Slater S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A. MEDLINE=21608551; PubMed=11743194;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "The genome of the natural genetic engineer Agrobacterium tumefaciens {\tt C58."};
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Bacteria; Proteobacteria; Rhizobiaceae; Rhizobium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Periplasmic nitrate reductase large NAPA OR ATU4408 OR AGR_L_917. Agrobacterium tumefaciens (strain C5
                                                                                                                                                                                                                                                                                                                                                                                                      InterPro;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Genome sequence of the plant pathogen and Agrobacterium tumefaciens C58.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Science
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Nester E.W.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                        InterPro;
                                                                                                                                                                                                                                                                                                                                                                                      InterPro;
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                                                                                                                                                                                                  Similarity
                                                                                                                        FVRNHTKFVRGVTDIG----
                                                                                                                                                     YIKANSKFI-GITELGPSLHWSYGLRP 27
                                                                                                                                                                                                                                                                                                                                                        IPR006656; Molybdopterin.
IPR006963; Molybdop_Fe4S4
IPR006657; Mol_dinuc_bind
IPR006655; Prok_Mboxred.
IPR0066311; Tat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             (TrEMBLrel. 21, Created)
(TrEMBLrel. 21, Last sequence update)
(TrEMBLrel. 23, Last annotation update)
                                                                                                                                                                                     Conservative
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                                                                                                                                                                                                                                                                                            molybdopterin; 1.
Molybdop_Fe4S4; 1.
Molydop_binding; 1.
Molydop_binding; 1.
01409; TAT_signal_seq;
                                                                                                                                                                                                                                                  ξ,
                                                                                                                                                                                                                                                                              MOLYBDOPTERIN_PROK_1;
                                                                                                                                                                                                                                                 93527 MW;
                                                                                                                                                                                                  34.8%;
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Alphaproteobacteria; Rhizobiales;
                                                                                                                                                                                                 Score 51.5; D
                                                                                                                          -YGLRP
                                                                                                                                                                                                                                               FF707BC71CA08B9E
                                                                                                                                                                                    Mismatches
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                                                                                                                                                                                                                                                  CRC64;
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Kanehori Sekine M.

Suzuki

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Inagaki Ishii

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                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-9310339; PubMed-10382966;
Kawarabayasi Y., Hino Y., Horikawa H., Yamazaki S., Haikawa Jin-no K., Takahashi M., Sekine M., Baba S.-I., Ankai A., Kc Hosoyama A., Fukui S., Nagai Y., Nishijima K., Nakazawa H., Takamiya M., Masuda S., Funahashi T., Tanaka T., Kudoh Y., Yamazaki J., Kushida N., Oguchi A., Aoki K.-I., Kubota K., Nakamura Y., Nomura N., Sako Y., Kikuchi H.;
"Complete genome sequence of an aerobic hyper-thermophilic crenarchaeon, Aeropyrum pernix KI.";
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MEDLINE-99406192; PubMed-9733802;

MEDLINE-99406192; M., Hanssens F., Raymakers J., Van Dyck E.,

Beschin A., Bilej M., Hanssens F., Raymakers J., Van Dyck E.,

Revets H., Brys L., Gomez J., De Baetselier P., Timmermans M.;

"Identification and cloning of a glucan- and Lipopolysaccharide-
binding protein from Eisenia foetida earthworm involved in the

activation of prophenoloxidase cascade.";

J. Biol. Chem. 273:24948-24954 (1998).

EMBL; AF030028; AAC35887.1;

EMBL; AF030028; AAC35887.1;

InterPro; IPR000757; Glyco_hydro_16; 1.

Pfam; PF00722; Glyco_hydro_16; 1.

Pfam; PF00722; Glyco_hydro_16; 1.
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Q9YD14;
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InterPro: IPR001678; Sun_Nop1/Nop2.
InterPro: IPR004521; Unchar_dom_2.
Pfam; PF01189; No11_Nop2_Sun; 1.
Pfam; PF01472; PUA; 1.
SMART; SM00359; PUA; 1.
TIGREPANS; TIGR00451; unchar_dom_2; 1.
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01-NOV-1999 (TrEMBLrel.
01-JUN-2002 (TrEMBLrel.
388AA long hypothetical
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Archaea; Crenarchaeota; Thermoprotei;
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Lumbricina; Lumbricidae;
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Pred. No.
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1; Oligochaeta; Haplotaxida;
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"NEDO human cDNA sequencing project.";

L Submitted (JUL-2002) to the EMBL/GenBank/DBJ databases.

C -- SIMILARITY: CONTAINS 1 CUB DOMAIN.

EMBL; AK095973; BAC04663.1; -- RINIFEDPO. TPONOREGO. GUD ACCOUNT.
Best Local Similarity
                         Query Match
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Q8IYK5; Q8IYK5; Q8IYK5;
01-MAR-2003 (TrEMBLrel. 23, Created
01-MAR-2003 (TrEMBLrel. 23, Last se
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Pfam; PF00754; F5_F8_type_C; 1
Pfam; PF03815; LCCL; 1.
SMART; SM00042; CUB; 1.
SMART; SM000231; FA58C; 1.
SMART; SM00031; LCCL; 1.
PROSITE; PS01180; CUB; 1.
PROSITE; PS50820; LCCL; 1.
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01-OCT-2002 (TrEMBLrel. 2
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Hypothetical protein FLJ3
Homo sapiens (Human)
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InterPro; IPR000421; FA58_C.
InterPro; IPR004043.
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                                                                      Submitted (JUL-2002) to the ENEMBL; BC035671; AAH35671.1; -. SEQUENCE 539 AA; 59196 MW;
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Mammalia; Eutheria; Primates; Catarrhini;
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                                                                                                                                                                     TISSUE-Brain;
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Mammalia; Eutheria; Primates;
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C Q31585;
T 01-NOV-1996 (TrEMBLrel: 01, Created)
YT 01-NOV-1996 (TrEMBLrel: 01, Last sequence update)
YT 01-DEC-2001 (TrEMBLrel: 19, Last annotation update)
YT 01-DEC-2001 (TrEMBLrel: 19, Last annotation update)
YE (DB02) MHC class II beta 1 (Fragment).
S Salmo salar (Atlantic salmon).
C Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutelo C Actinopterygii; Neopterygii; Teleostei; Eutelostei;
Protacanthopterygii; Salmoniformes; Salmonidae; Salmo.
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01-NOV-1999
01-NOV-1999
                                                                                                                                                                         Dorschner M.O., Duris T., Phillips R.B.;
"Diversity of a Lake Trout Mhc class II Gene.";
Submitted (FEB-199) to the EMBL/GenBank/DDBJ d
EMBL; AF130026; AAD20889.1;
InterPro; IPR000353; MHC_II_beta.
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01-NOV-1999 (TrEMBLrel. 12, Las
01-DEC-2001 (TrEMBLrel. 19, Las
MHC class II beta 1 (Fragment).
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                                                                                                                                                                                                                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebr
Actinopterygii; Neopterygii; Teleostei; Euteleo
Protacanthopterygii; Salmoniformes; Salmonidae;
                                                                                                            ProDom; PD000
Glycoprotein;
                                                                                                                                                                                                                                                                                                                                                                                                                                  Salvelinus namaycush (lake trout).
                                                                                                                                                                                                                                                                                                                                                                                                                                                              SANA.
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Pfam; PF00969; MHC_II_beta; 1.
ProDom; PD000328; MHC_II_beta; 1.
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                                                                        NON_TER
                                                                                                                                                             Pfam; PF00969; MHC_
                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        267
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otein; MHC
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AA;
                                                 AA;
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MHC_II_beta; 1.
II; Transmembrane
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57.9%;
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Pred.
    Score 50.5;
                                              E3095286582A9F2D CRC64;
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Euteleostei;
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01-MAR-2002 (
MHC class II
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Q951S2;
Q1-DEC-2001
01-DEC-2001
01-MAR-2002
                                                                                  Langefors A., Lohm J., von Schantz "Allelic polymorphism in MHC class Atlantic salmon (Salmo salar)."; Immunogenetics 5:329-336(2001). EMBL; AF104370; AAL04002.1; -. InterPro; IPR000353; MHC_II_beta.
                                                                                                                                                                                                                                                                                                                 Salmo salar (Atlantic salmon).
Eukaryota; Metazoa; Chordata; Crania
Acthopteryqii; Meopteryqii; Teleosi
Protacanthopterygii; Salmoniformes;
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pfam; pF00969; MHC_II_beta; 1.
proDom; pD000328; MHC_II_beta; 1.
Glycoprotein; MHC; MHC II; Transn
NON_TER 1 1
                                                                                                                                                                                                                          SEQUENCE FROM N.A. MEDLINE=21383619; PubMed=11491536;
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Salmo salar (Atlantic salmon)
Eukaryota; Metazoa; Chordata; Craniata; Vertebra
Actinopterygii, Weopterygii; Teleostei; Euteleos
Protacanthopterygii; Salmoniformes; Salmonidae;
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01-MAR-2002 (TrEMBLrel.
MHC class II beta chain
                                                                                                                                                                                                                                                                                            Protacanthopterygil;
NCBI_TaxID=8030;
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Comparative analysis of
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14 EYIRFNSTVGKFVGYTELG
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. 19, Last sequence 20, Last annotation (Fragment)
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formes; Salmonidae;
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Post-processing: Minimum Match 0%
Maximum Match 100%
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140.442 Million cell updates/sec
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AAU11423
AAU11431
AAR62715
AAU11414
AAR83570
AAU11427
AAM98951
AAP91504
AAR82586
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Synthetic immunoge
Synthetic immunoge
Synthetic immunoge
LHRH-containing im
P. falciparum circ
IgE CH4 region con
Synthetic immunoge
Vaccine related MH
Sequence of modifi
Plasmodium falcipa
                                                                                                                                                                                Description
 RESULT 1
AAU11423
ID AAU1
XX AAU1
XX AAU1
DT 12-M
XX Synt
XX Gona
KW Iutee
KW prom
KW brea
KW brea
KW brea
KW brea
KW chim
OS Chim
OS Chim
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FFT Pept
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Chimeric -
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                                                                        Modified-site
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33
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25..33
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* protein.	79	14	424	50.9		
S protein. Syn	3779	14	424	50.9		
9 polyepitope	25	21	ø	52.7		
polyepitope c	25	21	4	52.7		
<pre>0 polyepitope</pre>	AAY49253	21	\vdash	2		
polye	25	21	4	2		
eptide which	5	22	33	2		
e comprisi	9	22	33	2		
a CST3 prot	97	<u>1</u> 6	22	2		
poros	86	24	21	.2		
Plasmodium falcipa	46	23	21	2		
ium	36	23	21	2		
P. falciparum circ	54	23	21	۲.		
ciparum cir	85	23	21	ε.		
laria	50	23	21	2		
D7 related H	95	23	21	2		
osely MHC-rest	05	23	21	2		
falciparum circ	78	23	21	2		
falciparum	37	23	21	2		
c transpo	18	23	21	2		
um fa	5	22	21	.2		
<u></u>	44	22	21	2		
lasmodium fa	AAG89366	22	21			
ť	26	22	21	2		
ium fa	5	22	21	2		
ium falo	2	22	21	2		
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r cell (Th	55	21	21	.2		
thogen derived	9	21	21	2		
eptide derived f	25	20	21			
ell stimulator	44	18	21	2٠		
msporozoit	61	17	21	۲.		
ria circumspo	091	16	21	۲.		
alciparum C	595	16	21	52.7	89	
Malaria circumspor	AAR78920	16	21	2		

ALIGNMENTS

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Gonadotrophin releasing hormone; GnRH; synthetic immunogen; luteinising hormone releasing hormone; LHRH; contraceptive; promiscuous helper T-cell peptide epitope; immunomimic peptide epitope; breast cancer; uterine cancer; gynaecological cancer; endometriosis; uterine fibroid; benign prostatic hypertrophy; prostate cancer. Location/Qualifiers falciparum "Amidated glycine or glycinamide "Gonadotrophin releasing hormone epitope" "Malaria CSP protein (378-398 aa)" "Spacer peptide"

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RESULT 2
AUU11431
ID AUU1
XX AAU1
XX AAU1
XX Synt
XX Gona
XW Iute
XW Iute
XW Dron
XW Dron
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Chimeric
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                                                                                                                                        Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gonadotrophin releasing hormone; GnRH; synthetic immunogen; luteinising hormone releasing hormone; LHRH; contraceptive; promiscuous helper T-cell peptide epitope; immunomimic epitope; immunomimic epitide epitope; immunomimic epitide epitope; immuno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI;
                                                              Peptide
                                                                                                                                                                                                                          Misc-difference
                                                                                                                                                                                                                                                                                                       Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                              uterine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gonadotrophin releasing hormone;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic immunogen peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         12-MAR-2002
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Claim 11; Page 8; 43pp; English
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                                                                                                                                                                                                                                                                                                                                                                                                         uterine cancer; gynaecological cancer; endometriosis;
); benign prostatic hypertrophy; prostate cancer.
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17..36
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                                                                                                                                                                                                 /label= OTHER
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                                                                                       "Gonadotrophin
aa)"
                                "Spacer peptide"
                                                                                                                                                                 "Other Pyro-glutamic acid or 5-oxo proline"
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                                                                                                                releasing
                                                                                                                hormone epitope
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RESULT 3
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              antibodies against gonadotropin releasing hormone (GNRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope immunomimic peptide epitope or its analogue. The synthetic
                     Synthetic.
                                                       vaccine; LHRH; luteinising hormone releas
androgen-dependent carcinoma; antitumour;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Claim 11; Page 12-13; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic pepti epitope or its analogue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI;
                                               Plasmodium
                                                                                 Helper T
                                                                                                        LHRH-containing immunogenic peptide
                                                                                                                                 25-MAR-2003
10-SEP-1995
                                                                                                                                                                      AAR62715;
                                                                                                                                                                                            AAR62715 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                           hypertrophy and prostate cancer. The immunogen is effective in high and specific anti-GnRH antibody titres. The present sequen is a synthetic immunogen of the invention.
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                                                                                                                                                                                                                                                         17
                                                                                                                                                                                                                                                       Similarity
32; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                s
                                                                                 cell epitope; universal immune stimulator; invasin;
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                                             talciparum
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                                                                                                                                                                                                                                                                                                        Conservative
                                                                                                                                 (updated)
(first entry)
                                                                     luteinising hormone releasing hormone;
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43..51
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37..42
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/note= "Amidated glycine
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94.18;
                                             circumsporozoite
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Malaria CSP protein
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                                                                                                                                                                                                                                                                                                      DB 23;
.9e-16;
les 0;
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                                                          infertility;
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                                                                                                                                                                                                                                                                                                                             Length 51;
                                                                                                                                                                                                                                                                                                        Indels
                                                                   prostate;
                                                                                                                                                                                                                                                                                                                                                                                                                 benign prostatic
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other
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RESULT 4
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KW prom
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Best Local S
Matches 28
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              (LADD/)
(WANG/)
(ZAMB/)
Gonadotrophin releasing hormone; GnRH; synthetic immunogen; luteinising hormone releasing hormone; LHRH; contraceptive; promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
                                                                                                                                                                                                                                                                                                   The present sequence represents an LHRH-containing, invasin-free immunogenic peptide as above which can be used as a potent vaccine treating e.g. prostatic hyperplasia, androgen-dependent carcinoma, prostatic carcinoma, testicular carcinoma, endometriosis, benign uterine tumours, recurrent functional ovarian cysts, (severe)
                                                                                                                                                                                                                                                                                                                                                      a heterogeneous population expressing diverse HLA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Yersinia. Spacer amino acid sequences (e.g. Gly-Gly) can be provided between the invasin and Th domains and between the immune stimulator and hapten components. When the hapten is LHRH, then optionally the invasin domain can be omitted from the immune stimulator component.
                                                                                                                                                                                                                                                                                                                                                                                                                      stimulator is linked to a peptide or protein hapten containing B cell and/or cytotoxic Tlymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of
                                                                                                                                                                                                                                                                      premenstrual syndrome or oestrogen-dependent breast cancer, induction of infertility.
(Updated on 25-MAR-2003 to correct PN field.)
                                           P. falciparum
                                                                  12-MAR-2002
                                                                                       AAU11414;
                                                                                                         AAU11414 standard; peptide;
                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       that
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Immunogenic luteinising hormone releasing hormone peptide(s)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      WPI; 1994-357910/44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Ladd AE,
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14-APR-1994;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     suppress LHRH activity in males and females
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  8
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WANG
ZAMB
                                                                                                                                                                                                                   Similarity
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                                                                                                                                                                                EKKIAKMEKASSVFNVVNSGPSLHWSYGLRP 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Page 86;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Wang CY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            immunogenic peptides are provided in which a universal immune
                                                                                                                                                                                                                                                 \mathfrak{a}_{\mathfrak{a}}
                                                                                                                                                                                                         Conservative
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                                                                (first entry)
                                           circumsporozoite protein, CSP, peptide
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94US-0229275
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                                                                                                                                                                                                                  79.6%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Plasmodium falciparum cicrumsporozoite helper T cell epitope"
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                                                                                                                                                                                                                 Score 134.5;
Pred. No. 3e
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3e-13;
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ID AAR8
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Best Local Similarity
Matches 20; Conserv
                                                                         Synthetic
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                                                                                                                                                   13-JUN-1996
                                                                                                                                                                                                                                                                                                                                     Sequence
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             24-MAR-1995;
                                 05-OCT-1995.
                                                                                                                                                                         AAR83570;
                                                                                                                                                                                             AAR83570 standard;
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                                                                                                                             CH4 region
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                                                                                                                                                   (first entry)
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antibodies against gonadotropin releasing hormone (GnRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomLmic peptide epitope or its analogue. The synthetic lumnunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a peptide from circumsporozoite protein, CSP, a promiscuous helper T-cell peptide epitope used in the immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      breast cancer; uterine cancer; gynaecological cancer; endometriosis; uterine fibroid; benign prostatic hypertrophy; prostate cancer; circumsporozoite protein; CSP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Disclosure; Page 28; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptiepitope or its analogue
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (APHT-) APHTON CORP.
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Conservative 56.2%; 100.0%; Score 95; DB; Pred. No. 1.8 0; DB 23; . 1.8e-07; 0 Length 20 Indels 0; Gaps 0

DEKKIAKMEKASSVFNVVNS 20

20

peptide; ω ω A

IgE; CH4; immunoglobulin; epsilon; immunogen; helper vaccine; allergy; antibody; constant heavy chain. contg. peptide immunogen for treating allergies T cell; epitope;

95WO-US03741

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RESULT 6
AAU11427
ID AAU1
XX AAU1
XX AAU1
XX AAU1
XX AU
DT 12-M
XX Synt
XX Gona
KW Iute
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Best Local
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                                                                                                                                                                                                                                                                                                                                                                 Gonadotrophin releasing hormone; GnRH; synthetic immunogen; luteinising hormone releasing hormone; LHRH; contraceptive; promiscuous helper T-cell peptide epitope; immunomimic peptide epitope; breast cancer; uterine cancer; gynaecological cancer; endometriosis; uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAR82592-R82600 and AAR83560-R83581 are peptide immunogens that are useful in vaccines for treating allergic reactions. In the immunogens, an IGE CH4 peptide is attached C-terminally to a series of amino acids including a helper T cell epitope. The immunogen may also opt. contain a fatty acid or fatty acid derivative, an invasin domain or alpha-NH2. The immunogen produces high titrative, an invasin domain or alpha-NH2. The immunogen produces high titree of antibodies to the effector site in human IGE heavy chain (the CH4 domain peptide) which inhibit mast cell activation and reduce allergen-induced IGE prodn. The immunogens may be used in either a radially branching multimeric form or a linearly increase.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Wang
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          04-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic peptide-based T cell epitope - useful
                                             15-NOV-2001
                                                                           WO200185763-A2
                                                                                                                              Peptide
                                                                                                                                                              Peptide
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                                                                                                                                                                                                                                                    Misc-difference
                                                                                                                                                                                                                                                                                                     Synthetic
                                                                                                                                                                                                                                                                                                                        Chimeric
                                                                                                                                                                                                                                                                                                                                    Chimeric
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28-MAR-1994;
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ω
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llarity 100.0%;
Conservative 0;
            2001WO-US14363
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94US-0218461
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17..36
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11..16
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                                                                                                                                                                                                                                  'label=
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           peptide;
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                                                                                                                                                                                                                                                                                                                                   falciparum
                                                                                                            "Malaria
                                                                                                                                                                             "Gonadotrophin releasing
                                                                                                                                            "Spacer peptide"
                                                                                                                                                                                                                 "Other= Pyro-glutamic acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 immunogen contg. IgE CH4 peptide and helper for eliciting antibody prodn. for allergy
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Pred.
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                                                                                                            CSP protein (378-398
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                                                                                                                                                                             hormone
                                                                                                                                                                                                               or 5-oxo proline"
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Matches
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                                        Klinguer-Hamour C,
                                                                                                                                                                             27-SEP-2001
                                                                                                                                                                                                               WO200170772-A2
                                                                                                                                                                                                                                                                                 anti-melanoma
                                                                                                                                                                                                                                                                                                 hormonal disorder;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        standard;
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immunogen is useful inducing an immune response against GnRH in animal subject, and as such is useful as a contraceptive and in treatment of diseases such as cancer (of the breast, uterus and gynaecological cancer), endometriosis, uterine fibroids, benign hypertrophy and prostate cancer. The immunogen is effective in e high and specific anti-GnRH antibody titres. The present sequences as central fibraction of the immunogen is effective in example.
                                                                                                                                                                                                                                                                                                                                                                                                                  Glutamic acid; glutamine; vaccine; major histocompatibility com MHC; immunomodulator; antiallergic; endocrine; neuroprotectant; virucidal; bactericidal; antiparasitic; fungicidal; cytostatic; medicine; pharmaceutical; immune disorder; immune deficiency;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gonadotropin releasing hormone, co
promiscuous helper T-cell peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Vaccine related MHC ligand
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antibodies against gonadotropin releasing hormone (GnRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope immunomimic peptide epitope or its analogue. The synthetic
                                                                                                                                                22-MAR-2001; 2001WO-FR00872
                                                                                                                                                                                                                                                                                                Plasmodium malariae.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              05-MAY-2000; 2000US-202328P
                                             (FABR ) FABRE MEDICAMENT SA PIERRE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2002-049440/06
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1 DEKKIAKMEKASSVENVVNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DEKKIAKMEKASSVFNVVNS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            its analogue
                                                                                                                                                                                                                                                                                                                                                                  hypersensitivity; allergy; graft rejection; infection; sorder; central nervous system disease; cancer; melanom
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                                                                                                2000FR-0003711.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                                                                                                                                vaccine;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            glutamine; vaccine; major histocompatibility complex;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 immunogen
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  Corvala
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hormone, comprises fusion peptide having
all peptide epitope and immunomimic peptide
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Pred.
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Beck
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hes 0;
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  Goetsch
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other
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present invention describes a pharmaceutical compound (I) that CC contains an N-terminal glutamic acid (Glu) or glutamine (Gln) residue in the form of an addition salt with a strong, physiologically CC acceptable acid (II). Also described are: (a) a pharmaceutical CC composition containing at least one (I); (b) a vaccine containing at least one (I); (b) a vaccine containing at least one (I); (b) a vaccine containing at least one (I); (c) a method for in vitro diagnosis of diseases associated CC with the presence of (Ia); (d) a kit for method (c) that includes a (Ia); (c) and (e) a process for preparing (I). (I) has immunomodulator, endocrine, and (e) a process for preparing (I). (I) has immunomodulator, endocrine, constitution of the presence of (Ia); (d) a kit for method (c) that includes a (Ia); (l) and (e) a process for preparing (I). (I) has immunomodulator, endocrine, consider of the presence of (Ia); (d) a kit for method (c) that includes a (Ia); (l) and (e) a process for preparing (I). (I) has immunomodulator, endocrine, consider of the process for preparing (I). (I) has immunomodulator, endocrine, consider of the process for preparing (I). (I) has immunomodulator, endocrine, consider of the preparing (I), (I) has immunomodulator, endocrine, in the preparing (I), (I) are useful, in human or consider of the preparing (Ia); (I) are useful, butterial, parasitic or fungal infections; or (ii) of cancers. A particular application is in anti-melanoma vaccines. (I) are also useful for in vitro diagnosis of considered with interactions between MHC and (I), e.g. melanoma considered with interactions between MHC and (I), e.g. melanoma considered with interactions between MHC and (I), e.g. melanoma considered with interactions between MHC and (I), e.g. melanoma considered with interactions between MHC and (I), e.g. melanoma considered with interactions between MHC and (I), e.g. melanoma considered with interactions between MHC and (I).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Circumsporozoite peptide; T-cell epitope; immunogenic composition;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             13-MAR-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAP91504;
                                                                                                                                                                12-MAY-1989;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Plasmodium falciparum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAP91504 standard;
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                                 (HOFF ) HOFFMANN-LA ROCHE AG
                                                                                                24-MAY-1988;
                                                                                                                                                                                                                            29-NOV-1989
                                                                                                                                                                                                                                                                                           EP343460-A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         invention.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       modified Plasmodium circumsporozoite T-cell epitope CS.T3.
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                                                                                             88GB-0012214.
                                                                                                                                                                89EP-0108618
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers 1...2
                                                                                                                                                                                                                                                                                                                                                                                         /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52.7%;
                                                                                                                                                                                                                                                                                                                                                           "May be Val-Asn-Ser-OH,
Val-OH or -OH "
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               containing N-terminal glutamic acid anti-melanoma vaccines, is an additi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21
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Pred. No.
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1.4e-06;
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Matches 19
AAR82571-91 are helper T cell epitopes which can be used in the preparation of a peptide immunogen that is useful in vaccines for treating allergic reactions. In the immunogen an IGE CH4 peptide is attached C-terminally to a series of amino acids including a helper T cell epitope. The immunogen may also opt. contain a fatty acid or fatty acid derivative, an invasin domain or alpha-NH2. The immunogen produces high titres of antibodies to the effector site in human IGE heavy chain (the CH4 domain peptide) which inhibit mas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptide CS.T3 (residues 1-21) corresponds to residues 378-398 of the CS protein from P. falciparum but contains 2 Ala residues in place of the native protein's Cys residues at positions 384 and 389. Also claimed is AAP91504 (or modified forms, see FT) associated with an antigenic structure representing a B-cell epitope, pref. a multiple antigenic peptide, esp. multimers of the repeat sequences NANP present in P. falciparum CS protein.
                                                                                                                            Claim 3; Page 23; 87pp; English
                                                                                                                                                                   Synthetic peptide-based T cell epitope - useful
                                                                                                                                                                                                              WPI; 1995-351297/45.
                                                                                                                                                                                                                                        Wang CY;
                                                                                                                                                                                                                                                                                             25-OCT-1994;
28-MAR-1994;
                                                                                                                                                                                                                                                                                                                                                                  05-OCT-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                            IgE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Plasmodium
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   T-cell epitope in vaccines to elicit an immune response against pathogenic agents
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Modified Plasmodium CS peptide - T-cell epitope in vaccines to eli
                                                                                                                                                        treatment
                                                                                                                                                                                                                                                                                                                                       24-MAR-1995;
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                                                                                                                                                                                                                                                                                                                                                                                                                      Plasmodium falciparum
                                                                                                                                                                                                                                                                                                                                                                                                                                                 vaccine;
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ine; allergy; antibod
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        falciparum circumsporozoite helper T cell epitope,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      21 AA;
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                                                                                                                                                                                                                                                                   BIOMEDICAL
                                                                                                                                                                                                                                                                                              94US-0328912.
94US-0218461.
                                                                                                                                                                                                                                                                                                                                       95WO-US03741
                                                                                                                                                                                                                                                                                                                                                                                                                                               antibody;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52.7%; Scc
100.0%; Pr
172 0;
                                                                                                                                                                   immunogen contg. IgE CH4 peptide and helper for eliciting antibody prodn. for allergy
                                                                                                                                                                                                                                                                                                                                                                                                                                                            epsilon; immunogen; helper T cell; epitope;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21
                                                                                                                                                                                                                                                                                                                                                                                                                                                 constant
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Pred. No.
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1.6e-06;
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  RESULT
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Best Local s
Matches 19
                                                                                Matches
                                                                                           Query Match
Best Local
                                                                                                                                                  A compsn. which induces a cytotoxic T lymphocyte (CTL) response to an antigen (Ag) in a mammal comprises, a CTL Ag response inducing peptide and a lipid conjugated helper T cell inducing peptide (i.e. AAR78918-R78922). The compsn. induces a CTL response to bacterial, viral or tumour Ags, and is therefore useful in the treatment and prevention of diseases associated with the Ag, e.g. hepatitis B. (Updated on 25-MAR-2003 to correct PI field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   cell activation and reduce allergen-induced IgE prodn. The immunogens may be used in either a radially branching multimeric form or a linearly arranged monomeric form.
                                                                                                                             Sequence
                                                                                                                                                                                                                                             Disclosure; Page 29; 109pp; English.
                                                                                                                                                                                                                                                                   Compsn. inducing cytotoxic T lymphocyte response to pref. viral, bacterial, parasitic or tumour antigens - useful in the treatment and prevention of diseases associated with the antigen e.g. hepatitis {\tt B}
                                                                                                                                                                                                                                                                                                                                                    Vitiello MA,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Malaria circumsporozoite.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence
                                                                                                                                                                                                                                                                                                                                                                                                 16-FEB-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                      16-FEB-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                             24-AUG-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   WO9522317-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        378-398; cytotoxic T; CTL; epitope; helper T; HTL; cell; lymphocyte; antigens; treatment; disease prevention; tum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Malaria circumsporozoite 378-398 helper T lymphocyte epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     25-MAR-2003
27-MAR-1996
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                                                                                                                                                                                                                                                                                                                                                                         (CYTE-) CYTEL
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                                               EKKIAKMEKASSVFNVVNS
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(first entry)
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                                                                               1.6e-06;
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1.6e-06;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Immunogenic peptide(s) that induce immune response to cancer cells - that express a MAGE-3 protein peptide epitope used in vaccines or adoptive immuno:therapy to induce cytotoxic T lymphocytes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  P. falciparum
                                                                 Human melanoma antigen; MAGE-1; vaccines; MAGE associated tumours; malaria circumsporozoite 378-398; T helper peptide.
                                                                                                    Malaria circumsporozoite 378-398 T helper peptide
                                                                                                                            25-MAR-2003
09-OCT-1995
                                                                                                                                                             AAR70912;
                                                                                                                                                                                  AAR70912 standard;
                                                                                                                                                                                                                                                                                                                                   Sequence
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                                          Malaria circumsporozoite
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                                                                                                                                                                                  Protein;
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TL; melanoma; breast cancer; antibody.
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                                                                                                                                                                                                                                                                                                DB 16;
1.6e-06;
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Best Local :
                                                                                                                                                                                                                                                                membrane anchoring domain; helper T cell; surface antigen; core antigen pertussis toxin; tetanus toxin; measles virus F protein; immunotherapy; Chlamydia trachomatis madjor out protein; immunogen; vaccine; diphtheria toxin; plasmodium falciparum; circumsporozoite; E. coli Traf schistosoma mansoni; triose phosphate isomerase; allergenic reaction; allergic rhinitis; food allergy; anaphylaxis; virally-induced asthma;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The T helper peptides described in AAR70910-R70914 are used in conjunction with the C-terminal MAGE-1 peptides described in AAR70915 to AAR70969. Compsns. containing the T helper and MAGE-1 peptides can be administered, as a vaccine to patients susceptable to MAGE associated tumours, e.g. melanomas.
Peptide immunogen useful in treatment of allergy - membrane-bound IgE epsilon-chain peptide synthesise tandem with T helper epitope peptide
                                                                                                                                                                                                                                                                                                                                                              Circumsporozoite helper T cell epitope.
                                                                                                                                                                                                                                                                                                                                                                                        10-DEC-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW05612 standard;
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                                                                                                                                                                       02-MAY-1996
                                                                                                                                                                                                                    Plasmodium falciparum.
                                                                                                                                                                                                                                             corticosteroid
                                                                                                                                                                                                                                                        antihistamine;
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                                                                                                (UNBI-) UNITED BIOMEDICAL INC
                                                                                                                                                                                                                                                                                                                                     Immunoglobulin; IgE; membrane protein; human; epsilon chain; hepatitis
                                                 1996-230555/23.
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immune response against melanoma
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                                                                      Wang CY;
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                                                                                                                        94US-0328519.
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1.6e-06;
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Best Local :
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                                                                                                                                                                                                                                                                                                                                                                                                                                            Non-dendritic peptide carrier linked to a solid phase - usefu diagnostic agent and as a scaffold for production of chemical
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   T-cell stimulatory peptide; immunogen; non-dendritic; carrier scaffold; inhibition; metastasis; wound healing; solid phase.
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22-APR-1998
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim
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19; Conserv
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1.6e-06;
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A non-dendritic peptide carrier (A) has been developed which is coupled through a linker to a solid phase, forming a complex of (A)-solid phase, where (A) comprises 10-50 amino acids capable of forming a secondary structure in a benign buffer after liberation from the solid phase, and further the (A)-solid phase complex comprises an immunogenic substance and/or an immuno mediator coupled on (A). The present sequence represents a specifically claimed T-cell stimulatory peptide from the

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RESULT 15
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                                           vectors which can be used to express tumour-associated antigens and cytokines, and thus induce immunity to cancer. The VEE virus vectors of the invention can be used prevent, treat, and protect against primary and metastatic neoplastic diseases, especially tumours such as lung cancer, breast cancer, ovarian cancer, prostate cancer, pancreatic cancer, gastric cancer, colon cancer, renal cancer, bladder cancer, melanoma, hepatoma, sarcoma and lymphoma. The present sequence is derived from the plasmodium falciparum CS protein, and can be fused with the target peptide of the invention to provide a
                                                                                                                                                                                                                                                                                                                                                           The specification describes venezuelan equine encephalitis (VEE) virus
                                                                                                                                                                                                                                                                                                                                                                                                                                       Claim
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Peptide derived from Plasmodium falciparum CS protein.
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Search completed: September 24, 2003, 17:40:05 Job time : 38.2964 secs

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Result
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US-08-446-692-48

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US-08-788-822A-12

US-08-788-822A-12

US-08-797-12

US-08-797-13841-20

US-08-797-13841-20

US-08-797-13841-20

US-08-797-13841-20

US-08-797-13841-20

US-08-932-9298-1

US-08-931-32-928-1

US-08-931-32-938-1

US-08-313-2888-18

US-08-313-2888-18

US-08-313-2888-19

US-08-464-496-16

US-08-117-933A-7

US-08-817-933A-7

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US-08-817-933A-7

US-08-815-70218-17

US-08-817-933A-7

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GENERAL INFORMATION:
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            EKKIAKMEKASSVFNVVNSGGE-HWSYGLRP
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S S 4 1 4 D 1 8 8 4 1 8 8 4 1 8 8	2 US
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US-09-100-414B-73 US-09-303-323-73 US-09-70-014-73 US-09-70-014-73 US-08-465-167A-19 US-08-627-820-19 PCT-US92-0721B-16 US-08-305-871A-12 US-09-100-414B-68 US-09-303-323-68 US-09-70-014-68 US-09-70-014-68 US-09-78-156-4 US-08-387-156-4 US-08-878-748-4 US-09-383-912-4 US-09-383-912-4 US-08-387-156-10 US-08-878-748-10	US-08-87
	8-748-10
	Sequence
Sequence	10,
Sequence 73, Appl Sequence 73, Appl Sequence 19, Appl Sequence 19, Appl Sequence 112, Appl Sequence 112, Appl Sequence 68, Appl Sequence 68, Appl Sequence 68, Appl Sequence 4, Appli Sequence 10, Appli Sequence 10, Appli	Appl

ALIGNMENTS

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ATTORNEY/AGENT INFORMATION:

NAME: MATIA C.H. Lin

REGISTRATION NUMBER: 29,323

REFERENCE/DOCKET NUMBER: 1151

TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)415-8745

TELEPRAY: (516)751-6849

INFORMATION FOR SEQ ID NO: 27:
SEQUENCE CHARACTERISTICS:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: PatentIn Release CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PC-DOS/MS-DOS
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STREET: 345 Par
CITY: New York
STATE: NY
COUNTRY: US
                                                                          Similarity
                                                                                                                                                                                      amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     10154-0053
EKKIAKMEKASSVFNVVNSGPSLHWSYGLRP 32
                                                                                                                                                                                                            33 amino acids
                                                          Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PatentIn Release #1.0, Version #1.25
                                                                                                                                                    peptide
                                                                        79.6%;
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                                                        0;
                                                                        Score 134.5;
Pred. No. 2.7
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                                                        ed. No. 2.7e-13;
Mismatches 2;
                                                                                            DB 1;
                                                                                            Length
                                                          Indels
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US-08-186-266-6
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US-08-488-351A-27
                                                                  Sequence 6, Applicati Patent No. 5662907 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/229,275
FILING DATE: 14-APR-1994
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/057,166
FILLING DATE: 27-APR-1992
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: MAITIA C.H. LIN
REGISTRATION NUMBER: 129,323
REFERENCE/DOCKET NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-4146 |
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)415-8745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: Patentin Release #1.0, Ve.
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/488,351A
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/446,692
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                    TELEFAX: (516)751-684
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GENERAL INFORMATION:
APPLICANT:
APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                   TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: pept
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
NUMBER OF SEQUENCES: 114
                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compati
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: Maria C.H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       OPERATING SYSTEM:
                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                   LENGTH:
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                                                                                                                                                                                                                                                                . Similarity
28; Conserv
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                                                                                                        Application US/08186266
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                                                                                                                                                                                                                                                                                                                                                                                                   33 amino acids
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 SETTE,
CELIS,
                                KUBO, Ralph T. GREY, Howard M.
                                                                                                                                                                                                                                                                Conservative
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SYSTEM: PC-DOS/MS-DOS
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                Alessandro
                                                                                                                                                                                                                                                                            79.6%;
90.3%;
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Pred. No. 2.7e-13;
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RESULT 4
US-08-446-692-48
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                                                                                                                                     Sequence 48, Appli
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              GENERAL INFORMATION:
APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
NUMBER OF SEQUENCES: 114
                                                                                                                                                                                                                                                                                                                               Best
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: Bastian, Kevin I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
LENGTH: 21 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     REFERENCE/DOCKET NUMBER: 14
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        APPLICATION NUMBER: US 08/027,746 FILING DATE: 05-MAR-1993 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/159,339
FILING DATE: 29-NOV-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/0
FILING DATE: 25-JAN-1994
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PRIOR APPLICATION DATA:
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CORRESPONDENCE ADDRESS:
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TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                               LOCATION: 1..21
OTHER INFORMATION:
OTHER INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US 0: FILING DATE: 06-AUG-1993
                                                                                                                                                                                                                                                                                                                               Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                           NAME/KEY: Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     NAME: Bastian, Kevin L. REGISTRATION NUMBER: 34,774
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US 07/926,666 FILING DATE: 07-AUG-1992
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    amino acid
                                                                                                                                                       Application US/08446692
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                                                                                                                                                                                                                                                                                                                                                                                               /note= "Plasmodium falciparum CS
protein at positions 378-398."
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                                                                                                                                                                                                                                                                                                             Indels
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ADDRESSEE: Maria C.H. Lin

345 Park Avenue

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GENERAL INFORMATION:
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FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: MATIA C.H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212/415-8745
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   INFORMATION FOR SEQ ID NO:
FILING DALL.

CLASSIFICATION: 424

CLASSIFICATION DATA:

PRIOR APPLICATION DATA:

APPLICATION NUMBER: US 08/229,275

APPLICATION NUMBER: 14-APR-1994
                                                                                                                                                                                                                 ZIP: 10154-0053

COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
NUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS:
ADDRESSE: Maria C H Lin
                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/446,692
FILING DATE: 7-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 21 amino acids
                                                                                                                                                                                                           CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                   CITY: New York
STATE: NY
                                                                                                                                                                      APPLICATION NUMBER: US/
FILING DATE: 7-JUN-1995
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OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                         CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                   COUNTRY:
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STATE: NY
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19; Conserv
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GY: linear
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                                                                                                                                                                                                                                                                                                                                                                                     E: Maria C.H. Lin
345 Park Avenue
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. 9.6e-07;
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RESULT 6
US-09-100-409A-54
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GENERAL INFORMATION:
Query Match
Best Local Similarity
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                                                                                                                       REFERENCE/DOCKET NUMBER: 11:
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
TELEFAX: 212-751-6849
INFORMATION FOR SEQ ID NO: 54:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TELEFAX: (516)751-6849
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 21 amino acids
                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER: 29,32:
REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                              SOFTWARE: PatentIn Rel
SOFTWARE: #1.25
CURRENT APPLICATION DATA:
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ADDRESSEE: MORGAN & FINNEGAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Wang, Chang Yi TITLE OF INVENTION: PEPTII TITLE OF INVENTION: PREVENTION: IMMUNE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ATTORNEY/AGENT INFORMATION:
NAME: Maria C.H. Lin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION DATA:
                                                                  MOLECULE TYPE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                  APPLICATION NUMBER: FILING DATE: CLASSIFICATION: 514
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 08/057,166 FILING DATE: 27-APR-1992 CLASSIFICATION: 424
                                                                                TOPOLOGY:
                                                                                               TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
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                                                                                                            LENGTH:
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                                                                                                                                                                                                                        REGISTRATION NUMBER:
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                                                                                             amino acid
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                                                                                                              21 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                         USA
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(516)751-6849
                                                                                                                                                                                                                                                                                                                              PatentIn Release #1.0, Version #1.25
                                                                peptide
    52.7%;
100.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PEPTIDE COMPOSITION FOR PREVENTION AND TREATMENT OF HIV INFECTION IMMUNE DISORDERS
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Pred. No.
   Score 89;
Pred. No.
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    DB 3; L
9.6e-07;
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; ORGANISM: Malaria circumsporozoite 378-398 US-08-464-496-17
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                                                                                                                                                                                                                                                                                                                                                                                                                                Patent No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQ ID NOS: 75
SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Matches
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Best Local Similarity
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Patent No. 6322789
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APPLICANT: Vitiello, Maria
APPLICANT: Vitiello, Maria
APPLICANT: Chesnut, Robert
TITLE OF INVENTION: HLA-RESTRICTED HEPATITIS B VIRUS CTL
TITLE OF INVENTION: EPITOPES
TILE REPERENCE: 39963-20001.13
CURRENT APPLICATION NUMBER: US/08/464,496
CURRENT FILING DATE: 1995-06-05
PRIOR APPLICATION NUMBER: 07/935,811
PRIOR APPLICATION NUMBER: 07/935,811
PRIOR APPLICATION NUMBER: 07/935,811
                                                                                                                                                                                                                                                                                                                                                                                                                GENERAL INFORMATION:
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PRIOR FILING DATE: 1992-01-29
PRIOR APPLICATION NUMBER: 07/749,568
PRIOR FILING DATE: 1991-08-26
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                          CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/788,822A
FILING DATE: 23-JAN-1997
                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                      APPLICANT: DeFrees, Shawn
APPLICANT: Sette, Alessandro
TITLE OF INVENTION: Induction of Immune H
TITLE OF INVENTION: Desired Determinants
NUMBER OF SEQUENCES: 30
                                                                                                                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
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                                                                                                                                                                                                 COUNTRY: USA
                                                                                                                                                                                                                                 CITY: San Francisco
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6413935
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                                                                                                                                                                                                              California
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                                                                                                                                                                                                                                                                                                                                                                                               Alexander,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Conservative
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                                                                                PatentIn Release #1.0, Version #1.30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            52.7%; Score 89; 100.0%; Pred. No.
                                                                                                                                                                                                                                                                                                                                       Induction of Immune Response Against
                                                                                                                                                                                                                                                                                                                                                                                               Jeffrey L.
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9.6e-07;
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US-08-197-484-97
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT:
APPLICANT:
APPLICANT:
                                                                                                                                                                                        APPLICATION NUMBER: US 07
FILING DATE: 26-AUG-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07
FILING DATE: 27-APR-1992
                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0:
FILING DATE: 26-AUG-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                 CLASSIFICATION: 424
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: PatentIn Release #1.0, Version #1.25 CURRENT APPLICATION DATA:
                                                                                                                                    PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 0:
FILING DATE: 29-JAN-1992
                                                                                                                                                                                                                                                                                                                                                                                                                           COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: COMPOSITIONS AND METHODS FOR ELICITING TITLE OF INVENTION: CTL IMMUNITY NUMBER OF SEQUENCES: 153
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NAME: Bastian, Kevin L.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                      COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                           REGISTRATION NUMBER: 31,990
                                                                                                                                                                                                                                                                                                                    APPLICATION NUMBER: US/01 FILING DATE: 16-FEB-1994
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TOPOLOGY: 1
                                                NAME:
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5. 6419931
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                                                Parmelee,
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Bastian, Kevin L.
Bastian, Kevin L.
34,774
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Steuart Street Tower, One Market Plaza
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24-JAN-1996
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                                            Steven W
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Alessandro D
                                                                                                    US 07/749,568
                                                                                                                                                      US 07/827,682
                                                                                                                                                                                                            US 07/874,491
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; LOCATION: 1..21
; OTHER INFORMATION: /note= "Malaria circumsporozoite
; OTHER INFORMATION: 378-398"
US-08-197-484-97
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; Sequence 97, Application PC/TUS9502121
; GENERAL INFORMATION:
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                                                                                                                                         TELEPHONE: (206) 467-9600
TELEFAX: (415) 543-5043
INFORMATION FOR SEQ ID NO: 97
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SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US 07/827,682
FILING DATE: 29-JAN-1992
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/749,568
FILING DATE: 26-AUG-1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/197,484
FILING DATE: 16-FEB-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/02121
                                                                                                                                                                                            REGISTRATION NUMBER: 31,990
REFERENCE/DOCKET NUMBER: 14137-26-4PC
TELECOMMUNICATION INFORMATION:
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                                TOPOLOGY: ur
MOLECULE TYPE:
                                                                                                                        SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                   FILING DATE: 26-AUG-1991
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/874,491
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APPLICATION NUMBER: US 07/935,811
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                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                LENGTH: 21 amino acids
TYPE: amino acid
STRANDEDNESS: unknown
                                                                                                                                                                                                                                                                                                                                                                                                                                                      FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LENGTH: 21 amino acids
TYPE: amino acid
STRANDEDNESS: unknown
                                                                                                                                                                                                                                                                                                                                                                                                   FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
NAME/KEY: Peptide
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19; Conserv
                                                                                                                                                                                                                                                    Parmelee, Steven W.
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(206) 623-6793
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PCT-US95-13841-20
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Matches
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                                                                              Query Match
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                                                                                                                                                                                           INFORMATION FOR SEQ ID NO:
                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 21 amino acids
                                                                                                                                                                                                                                TELECOMMUNICATION INFORMATION: TELEPHONE: 212-758-4800
                                                                                                                                                                                                                                                                      ATTORNEY/AGENT INFORMATION:
NAME: Lin, Maria C.H.
REGISTRATION NUMBER: 29,323
                                                                                                                                                                                                                                                                                                                                        PRIOR APPLICATION DATA:
PRIOR APPLICATION NIMBER: 08/328,519
                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: WordPerfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/13841
FILING DATE: 25-OCT-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TITLE OF INVENTION: Synthetic IgE Membrane Anchor TITLE OF INVENTION: Peptide Immunogens for the Treatment of Allergy
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: United APPLICANT: Wang,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES:
                                                                                                                                                                                              TELEFAX: 2-
TELEFAX: 421792
                                                                Local
                                                                                                                                                                                                        COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: OTHER INFORMATION:
                                                                                                                                   TYPE: amino acid TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                              APPLICATION NUMBER: 08/3 FILING DATE: 25-OCT-1994
                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STREET:
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nes 19; Conserv
                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CITY:
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STREET: 345 Park Avenue
                                                    l Similarity
19; Conserv
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EKKIAKMEKASSVFNVVNS 21
               EKKIAKMEKASSVENVVNS 20
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                                                      Conservative
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                                                                                                                      peptide
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                                               52.7%; 5c.
100.0%; Pr
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378-398"
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                                                                 Score 89;
Pred. No
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Pred. No.
                                                      Mismatches
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                                                                 DB 5; 1
9.6e-07;
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9.6e-07;
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RESULT 12 US-08-760-797A-1

Sequence 1, Application US/08760797A Patent No. 5928902 GENERAL INFORMATION:

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
                                                                                                                                                                                                                                                                              GENERAL INFORMATION:
APPLICANT: De Wilde, Michel
APPLICANT: Cohen, Joseph
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            INFORMATION FOR SEQ ID NO:
SOFTWARE: FastSEQ for Windows Version CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/760 7077
                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Baumeister, Kirk REGISTRATION NUMBER: 33,833 REFERENCE/DOCKET NUMBER: B45015-1C2 TELECOMMUNICATION INFORMATION: TELEPHONE: 610-270-5096
                                                                                                                                                                                       CORRESPONDENCE ADDRESS:
ADDRESSEE: Smithkline Beecham Corporation
STREET: 709 Swedeland Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CORRESPONDENCE ADDRESS:
ADDRESSEE: SmithKline Beecham Corporation
STREET: 709 Swedeland Road
                                                                                                                                                                                                                                  TITLE OF INVENTION: Hybrid Protein Between CS TITLE OF INVENTION: from Plasmodium and HBSAG NUMBER OF SEQUENCES: 4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE CHARACTERISTICS:
LENGTH: 423 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE: 17-MAY-1995
ATTORNEY/AGENT INFORMATION:
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APPLICATION NUMBER: 08/4
FILING DATE: 17-MAY-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TITLE OF INVENTION: Hybrid Protein Between CS
                                                        COMPUTER: IBM COR
OPERATING SYSTEM:
                                                                                                                                                           STREET: 709 SWEUGETTE CITY: King of Prussia
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OPERATING SYSTEM:
                                                                                                                           COUNTRY: U. ZIP: 19406
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18; Conserv
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FastSEQ for Windows Version 2.0
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RESULT 14
US-08-932-929B-1
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Best Local
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APPLICANT: De Wilde, Michel
APPLICANT: Cohen, Joseph
           INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          INFORMATION FOR SEQ ID NO:
                                                                                                                                                                      PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/7/
FILING DATE: 04-DEC-1996
APPLICATION NUMBER: 08/4/
FILING DATE: 17-MAY-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                     NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: Smithkline Beecham Corporation
STREET: 709 Swedeland Road
                                                                           TELECOMMUNICATION INFORMATION: TELEPHONE: 610-270-5096
                                                                                                                                                                                                                                                                                                   SOFTWARE: FastSEQ for CURRENT APPLICATION DATA:
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CLASSIFICATION: 435
PRIOR APPLICATION DATA:
                                          TELEX:
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CLASSIFICATION:
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                                                                                                          REFERENCE/DOCKET NUMBER:
                                                                                                                                          NAME:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAME: Baumeister, Kirk REGISTRATION NUMBER: 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICATION NUMBER: 08/4 FILING DATE: 17-MAY-1995
LENGTH:
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                                                              610-270-5090
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N: 435
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                                                                                                                                                                                                                                                                                                   DOS
for Windows Version
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                                                                                                                                                                                                                     08/760,797
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                                                                                                                        33,833
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 86; DB 2; Pred. No. 8.1e-05;
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1;

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SEQUENCE CHARACTERISTICS:
LENGTH: 424 amino acids.
TYPE: amino acid
STRANDEDNESS: single
TOPOLOGY: linear
US-08-932-929B-3
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US-08-932-929B-3
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; TOPOLOGY: linear
US-08-932-929B-1
Search completed: September 24, 2003, 17:00:23 Job time: 10.8812 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence 3, Application US/08932929B Patent No. 6169171
                                                                                                                                                                        Query Match
Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 50.9%; Score 86; DB 3; Best Local Similarity 85.7%; Pred. No. 8.1e-05; Matches 18; Conservative 0; Mismatches 3
                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GENERAL INFORMATION:
APPLICANT: De Wilde, Michel
APPLICANT: Cohen, Joseph
TITLE OF INVENTION: Hybrid Protein Between CS
TITLE OF INVENTION: from Plasmodium and HBsAG
NUMBER OF SEQUENCES: 4
CORRESPONDENCE ADDRESS:
ADDRESSEE: SmithKline Beecham Corporation
STREET: 709 Swedeland Road
                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION:
CLASSIFICATION

PRIOR APPLICATION NUMBER: 08/760,797

APPLICATION NUMBER: 08/442,612

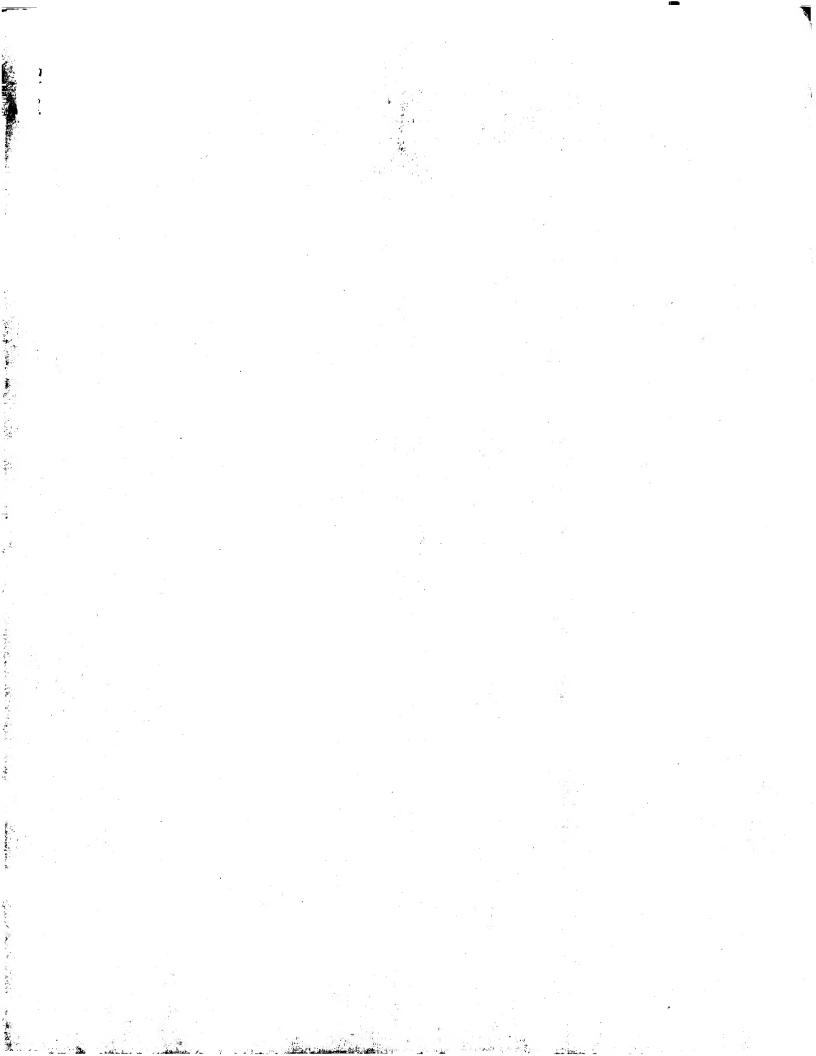
FILING DATE: 01-MAY-1995

ATTORNEY/AGENT INFORMATION:
NAME: Baumeister, Kirk

REGISTRATION NUMBER: 33,833

REFERENCE/DOCKET NUMBER: 845015-:
TELEPONE: 610-270-5096

TELEFAX: 610-270-5090
                                                                                                                                                                                                                                                                                                                                                 INFORMATION FOR SEQ ID NO: 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COMPUTER: IBM Compatible
OPERATING SYSTEM: DOS
SOFTWARE: FastSEQ for Windows Version 2.0
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/932,929B
FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STREET: 709 Swedeland CITY: King of Prussia STATE: PA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                COUNTRY: USA
ZIP: 19406
                                                                            171 EKKICKMEKCSSVFNVVNS----SIGLGP 195
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     175 EKKICKMEKCSSVFNVVNSRP 195
                                                                                                  2 EKKIAKMEKASSVFNVVNSGPSLHWSYGLRP 32
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                                                                                                                                                        Conservative
                                                                                                                                                                      50.9%; Score 86; DB 3; 67.7%; Pred. No. 8.1e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                 B45015-1FWC2
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                                                                                                                                                      Indels
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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OM protein - protein search, using sw model

September 24, 2003, 16:57:10 ; Search time 16.5457 Seconds (without alignments) 301.778 Million cell updates/sec Run on:

US-09-848-834A-12

169 1 DEKKIAKMEKASSVFNVVNSGPSLHWSYGLRPX 33 Perfect score: Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

566894 seqs, 151307093 residues Searched:

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

Database :

/ cgn2_6/ptodata/2/pubpaa/USGG_PUBCOMB.pep: / cgn2_6/ptodata/2/pubpaa/USGG_PUBCOMB.pep:* / cgn2_6/ptodata/2/pubpaa/USGG_PUBCOMB.pep:* / cgn2_6/ptodata/2/pubpaa/PCTUS_PUBCOMB.pep:* / cgn2_6/ptodata/2/pubpaa/USGB_PUBCOMB.pep:* / cgn2_6/ptodata/2/pubpaa/USGB_NEW_PUB.pep:* /cgn2_6/ptodata/2/pubpaa/US07_PUBCOMB.pep:*/cgn2_6/ptodata/2/pubpaa/PCT_NEW_PUB.pep:*/cgn2_6/ptodata/2/pubpaa/US06_NEW_PUB.pep:* Published_Applications_AA:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	Sequence 12, Appl	Sequence 20, Appl	Sequence 3, Appli	Sequence 16, Appl	Sequence 54, Appl	Sequence 1482, Ap	Sequence 33, Appl	Sequence 710, App	Sequence 761, App	Sequence 711, App	Sequence 1404, Ap	Sequence 97, Appl	Sequence 19, Appl	Sequence 23, Appl	Segmence 15. Appl
ΩI	US-09-848-834A-12	US-09-848-834A-20	US-09-848-834A-3	US-09-848-834A-16	US-10-239-313A-54	US-09-932-165-1482	US-10-116-118-33	US-09-935-384-710	US-10-062-109A-761	US-09-942-052-711	US-10-001-469-1404	US-10-128-711-97	US-09-848-834A-19	US-09-747-802-23	US-09-865-294-15
80	6	6	σ	6	12	12	12	12	12	12	15	15	6	11	1
Query Match Length DB	33	51	20	38	19	21	21	21	21	21	21	21	46	21	21
Query	99.4	92.9	56.2	56.2	52.7	52.7	52.7	52.7	52.7	52.7	52.7	52.7	49.4	48.5	48.5
Score	168	157	95	95	89	83	89	68	83	8	89	68	83.5	82	82
Result No.	-1	7	m	4	S	9	7	80	6	10	11	12	13	14	15

LOCATION: (25)..(33)

31, 11, A 53, 96, 36,			31, 32, 40, 44,	Sequence 52, Appl Sequence 52, Appl Sequence 51, Appl Sequence 61, Appl Sequence 26, Appl Sequence 9, Appl Sequence 9, Appl Sequence 10, Appl
US-09- US-09- US-10 US-10	12 US-10-239-313A-38 12 US-10-339-313A-39 12 US-10-239-313A-41 12 US-10-239-313A-60 12 US-10-239-313A-64 12 US-10-239-313A-64	US-10-239- US-10-239- US-10-239- US-10-239- US-10-239-	12 US-10-239-313A-31 12 US-10-239-313A-32 12 US-10-239-313A-40 12 US-10-239-313A-40 12 US-10-239-313A-44	12 US 12 US 12 US 12 US 12 US 12 US 9 US-
396 28 28 17 17 17	177	117	17 17 17 17 17 17 17 17 17	22 22 17 22 23 11 34 34
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82 81.5 79 79 75	, , , , , , , , , , , , , , , , , , ,	7777 7447 80 80	733	7777738
16 17 18 19 20	22 23 24 25 25	27 28 29 30 31	33 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	2

ALIGNMENTS

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Sequence 12, Application US/09848834A

Sequence 12, Application US/09848834A

Sequence 12, Application US/09848834A

Sequence 12, Application

Patent No. US20020076416A1

SETIE REFERENCE: I10265-0047

CURRENT APPLICATION NUMBER: US/09/848,834A

CURRENT APPLICATION NUMBER: 60/202,328

PRIOR APPLICATION NUMBER: 60/202,328

PRIOR APPLICATION NUMBER: 60/202,328

PRIOR PILING DATE: 2000-05-05

NUMBER OF SED ID NOS: 20

SOFTWARE: PatentIn version 3.0

SOFTWARE: PatentIn version 3.0

SOFTWARE: PatentIn version 3.0

SOFTWARE: PatentIn version 3.0

OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence FRATURE:

OTHER INFORMATION: Plasmodium falciparum CSP protein linked by a spacer to amino OTHER INFORMATION: id sequence 2-10 of the GRRH hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: MOD_RES.

LOCATION: (1). (1)

OTHER INFORMATION: Amidated aspartic acid

NAME/KEY: MOD_RES.

LOCATION: (33)

OTHER INFORMATION: Amidated glycine or glycinamide

NAME/KEY: PEPPIDE

NAME/KEY: PEPPIDE

OCHER INFORMATION: (20)

OTHER INFORMATION: (Plasmodium falciparum) circumsporozoite

OTHER INFORMATION: (CSP) protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: PEPTIDE (210-CATION: (21)-(24)
OTHER INFORMATION: Spacer peptide NAME/KEY: PEPTIDE
US-09-848-834A-12
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OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of the OTHER INFORMATION: RH hormone linked by a spacer to amino acid sequence 378-398 > OTHER INFORMATION: the Plasmodium falciparum circumsporozoite (CSP) protein NAME/KET: MOD.RES
LOCATION: (1)..(1)
OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
LOCATION: (1)..(10)
OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone
                                                                                                                                                                                                                                                                                                                              NAME/KEY: PEPTIDE LOCATION: (1)...(20) CPHER INFORMATION: Anino acid sequence 378-398 of the Plamodium OTHER INFORMATION: falciparum circumsporozoite (CSP) protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION: (17)...(36)
OTHER INFORMATION: Amino acid sequence 378-398 of the Malaria OTHER INFORMATION: (Plasmodium falciparum) circumsporozoite OTHER INFORMATION: (CSP) protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 56.2%; Score 95; DB 9; Length 20; Best Local Similarity 100.0%; Pred. No. 3e-07; Matches 20; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 16, Application US/09848834A
Patent No. US2002076416A1
GENERAL INCAMATION:
APPLICANT APPLICATION
TILLE REFERENCE: 110265-004
CURRENT FILING DATE: 2001-05-04
PRIOR PAPLICATION NUMBER: 60/202,328
PRIOR PILICATION NUMBER: 60/202,328
PRIOR PILICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 200
SOFTWARE: PatentIn version 3.0
; TITLE OF INVENTION: Chimeric Peptide Immunogens
; FILE REFRENCE: 1102865-0047
; CURRENT APPLICATION NUMBER: U5/09/848,834A
; CURRENT FILING DATE: 2001-05-04
; PRIOR APPLICATION NUMBER: 60/202,328
; NUMBER OF SEQ ID NOS: 20
; SOFTWARE: Patentin version 3.0
; SOFTWARE: Patentin version 3.0
; LENGHI 20
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100.0%; Pred. No. 5.9e-07;
iive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: PEPTIDE
LOCATION: (11)...(16)
OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                1 DEKKIAKMEKASSVFNVVNS 20
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                                                                                                                                                                                                                                                                                  ORGANISM: Plasmodium falciparum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: PRT ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
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Best Local Similarity
Matches 20; Conserva
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LENGTH: 36
                                                                                                                                                                                                                                                           TYPE: PRT
                                                                                                                                                                                                                                                                                                            FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 4
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of human OTHER INFORMATION: GRRH linked by a spacer to amino acid sequence 378-398 of Plasmod OTHER INFORMATION: ium falciparum circumsporozoite (CSP) protein NAME/KEY: MOD_RES
LOCATION: (1)..(1)
NAME/KEY: MOD_RES
LOCATION: (1)..(1)
NAME/KEY: MOD_RES
LOCATION: (1)..(51)
OTHER INFORMATION: Amidated glycine or glycinamide
NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KET: PEPTIDE
LOCATION: (17)..(36)
OTHER INFORMATION: Amino acid sequence 378-398 of the Plasmodium falciparum
OTHER INFORMATION: Circumsporozoite (CSP) protein
NAME/KEY: PEPTIDE
LOCATION: (37)..(42)
OTHER INFORMATION: Spacer peptide
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                                                                                                                               Gaps
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     OTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: PEPTIDE 1 LOCATION: (43)..(51) OTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH hormone US-09-848-834A-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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                                                                             Length 33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 51;
                                                                                                                               0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                           Sequence 20, Application US/09848834A
Patent No. US2002076416A1
GENERAL INFORMATION:
FAPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILLE REFERENCE: 1102665-004
CURRENT FILING DATE: 2001-05-04
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin Version 3.0
LENGTH: 51
                                                                        99.4%; Score 168; DB 9; 100.0%; Pred. No. 8.6e-18; Live 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 157; DB 9; I
Pred. No. 5.9e-16;
0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         17 DEKKIAKMEKASSVFNVVNSSSGPSLHWSYGLRP 50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1 DEKKIAKMEKASSVFNVVN--SGPSLHWSYGLRP 32
                                                                                                                                                                                                          1 DEKKIAKMEKASSVFNVVNSGPSLHWSYGLRP 32
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          NAME/KEY: PEPTIDE
LOCATION: (11)..(16)
OTHER INFORMATION: Spacer peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match 92.9%;
Best Local Similarity 94.1%;
Matches 32; Conservative
                                                                Query Match
Best Local Similarity 100.
Matches 32; Conservative
       ; OTHER INFORMA
US-09-848-834A-12
                                                                                                                                                                                                                                                                                                    RESULT 2
US-09-848-834A-20
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US-09-848-834A-3
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Length 36; 0; Indels 3 EKKIAKMEKASSVFNVVNS 21

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Sequence 710, Application US/09935384

Publication No. US20030166526A1

Sequence 710, Application US/09935384

Publication No. US20030166526A1

Septicant: CHALLITA-EID, PIA

APPLICANT: CHALLITA-EID, PIA

APPLICANT: HUBERT, RENE

APPLICANT: AFAR, DANIEL

APPLICANT: AFAR, DANIEL

APPLICANT: AFAR, ANANY

APPLICANT: GE, WANCHAO

TITLE OF INVENTION: USCEPT IN THE TREATMENT AND DETECTION OF BLADDER AND

TITLE OF INVENTION: USCEPT IN THE TREATMENT AND DETECTION OF BLADDER AND

TITLE OF INVENTION: OTHER CANCERS

FILE REFERENCE: 51188-20033.00

CURRENT FILING DATE: 2004-08-22

PRIOR APPLICATION NUMBER: 60/227,098

PRIOR PELING DATE: 2000-08-22

PRIOR APPLICATION NUMBER: 60/227,098

SOFTWARE: PatentIN Ver. 2.1

SEQ ID NO 710

TEMMON 10
                      | Sequence 33, Application US/10116118 |
| Sequence 33, Application WS/10116118 |
| Publication NO. US20030143672A1 |
| GENERAL INFORMATION |
| APPLICANT: Tangri, Shabnam |
| APPLICANT: Stick, Glenn |
| APPLICANT: Fikes, John D. |
| TTLE OF INVENTION: Heterocitic Analogs and Related Methods |
| FILE REFERENCE: 2060.0099003 |
| CURRENT APPLICATION NUMBER: US/10/116,118 |
| PRIOR FILING DATE: 1999-11-18 |
| PRIOR FILING DATE: 1999-11-18 |
| PRIOR FILING DATE: 2000-10-06 |
| NUMBER OF SED IN NUMBER: US 60/239,008 |
| NUMBER OF SED IN OSS: 53 |
| SOFTWARE PATENTIN VETSION 3.1 |
| S
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100.0%; Pred. No. 2.4e-06;
Live 0; Mismatches 0;
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Best Local Similarity 100.0
Matches 19; Conservative
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US-09-935-384-710
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LENGTH: 21
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                                                                                               APPLICANT: KLINGUER - HAMOUR, Christine
APPLICANT: CORVAIA, Nathalie
APPLICANT: BCEK, Alain
APPLICANT: BCEK, Alain
APPLICANT: BCEK, Alain
APPLICANT: BCETSCH, Liliane
TITLE OF INVENTION: MOLECULE OF PHARMACEUTICAL INTEREST COMPRISING AT ITS
TITLE OF INVENTION: OF A PHYSIOLOGICALLY ACCEPTABLE STRONG ACID
TITLE OF INVENTION: OF A PHYSIOLOGICALLY ACCEPTABLE STRONG ACID
FILE REFERENCE: 343 727 - 48
CURRENT APPLICATION NUMBER: US/10/239,313A
CURRENT PILING DATE: 2002-0919
PRIOR FILING DATE: 2000-03-23
PRIOR PELLING DATE: 2000-03-22
NUMBER OF SEQ ID NOS: 697
SOFTWARE: PARCHILING VET. 2.1
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APPLICANT: CHALLITA-EID, PIA M.
APPLICANT: FARIS, MARY
APPLICANT: FARIS, MARY
APPLICANT: AFFRAN, DOUGLAS
APPLICANT: AFAR, DANIEL
APPLICANT: LEVIN, ELANA
APPLICANT: LEVIN, ELANA
APPLICANT: HUBERT, RENE
APPLICANT: HUBERT, RENE
APPLICANT: JAKOBOVITS, AYA
TITLE OF INVENTION: NUCLEIC ACIDS AND CORRESPONDING PROTEINS ENTITLED
TITLE OF INVENTION: B3PZH3 AND CATFEZEII USEFUL IN TREATMENT AND
TITLE OF INVENTION: B3PZH3 AND CATFEZEII USEFUL IN TREATMENT AND
TITLE OF INVENTION: DETECTION OF CANCER
FILE REFERENCE: 51158-20014.00
CURRENT PILING DATE: 2001-08-17
PRIOR FILING DATE: 2000-08-17
NUMBER OF SEQ ID NOS: 1508
SOFTWARE: PALENTIN VET. 2.1
LENGTH: 21
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Best Local Similarity 100.0%; Pred. No. 2.4e-06;
Matches 19; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Sequence 1482, Application US/09932165
Publication No. US20030134784A1
GENERAL INFORMATION:
Sequence 54, Application US/10239313A Publication No. US20030175285A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 EKKIAKMEKASSVFNVVNS 20
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TYPE: PRT
ORGANISM: Plasmodium malariae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Best Local Similarity
Matches 19; Conserv
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2 EKKIAKMEKASSVFNVVNS 20

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US-10-001-469-1404
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Publication No. US20030170626A1

GENERAL INFORMATION:
APPLICANT: Raitano, Arthur B.
APPLICANT: Raitano, Arthur B.
APPLICANT: Afar, Daniel
APPLICANT: Afar, Daniel
APPLICANT: CAILITA-Eid, Pia M.
TILLE OF INVENTION: UGECUE ACID AND CORRESPONDING PROTEIN ENTITLED 85P1B3
TITLE OF INVENTION: UGECUE IN TREATMENT AND DETECTION OF CANCER
TITLE OF INVENTION: UGECUE IN TREATMENT AND DETECTION OF CANCER
TITLE OF INVENTION: UGECUE INVENTION: UGECUE INVENTION OF CANCER
FILE REFERENCE: 51158-20028.00
CURRENT FILING DATE: 2001-08-28
PRIOR FILING DATE: 2001-08-28
PRIOR FILING DATE: 2000-08-28
NUMBER OF SEQ ID NOS: 744
SOFTWARE: Patentin Ver: 2.1
FEMALE.
                                                                                                                                                                                                                                                                             APPLICANT: Mortison, Karen Jane Meyrick
APPLICANT: Jackboults, Aya
TITLE OF INVENTION: Nucleic Acid and Corresponding Protein
TITLE OF INVENTION: Entitled 161P2F10B Useful in Treatment and Detection of
TITLE OF INVENTION: Entitled 161P2F10B Useful in Treatment and Detection of
TITLE OF INVENTION: Cancer
FILE REFERENCE: 51158-20062.01
CURRENT APPLICATION NUMBER: US/10/062,109A
CURRENT FILING DATE: 2002-01-31
PRIOR FILING DATE: 2001-11-07
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100.0%; Pred. No. 2.4e-06;
Live 0; Mismatches 0;
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100.0%; Pred. No. 2...
... 0; Mismatches
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SOFTWARE: FastSEQ for Windows Version 4.0
SEQ ID NO 761
                                                                              0S-10-062-109A-761
; Sequence 761, Application US/10062109A
; Publication No. US20030165505A1
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  EKKIAKMEKASSVFNVVNS 21
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                                                                                                                                                                        APPLICANT: Agensys
APPLICANT: Challita-Bid, Pia M.
APPLICANT: Raitano, Arthur B.
APPLICANT: Faris, Mary
APPLICANT: Hubert, Rene S.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; TYPE: PRT
; ORGANISM: Plasmodium falciparum
US-09-942-052-711
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 100.(
Matches 19; Conservative
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Best Local Similarity 100.
Matches 19; Conservative
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                                                                                                                                                 GENERAL INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT
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APPLICANT: AFAR, DANIEL
APPLICANT: FARIS, MARY
APPLICANT: CHALLITA-BID, PIA
TITLE OF INVENTION: NUCLEIC ACID AND CORRESPONDING PROTEIN ENTITLED
TITLE OF INVENTION: 101P3A11 USEFUL IN TREATMENT AND DETECTION OF CANCER
FILE REFERENCE: 51158-20024.20
CURRENT APPLICATION NUMBER: 06/157,902
PRIOR PILING DATE: 1999-10-05
PRIOR APPLICATION NUMBER: 60/291,118
PRIOR PILING DATE: 2001-05-15
PRIOR PILING DATE: 2001-05-15
PRIOR PELING DATE: 2000-10-05
PRIOR FILING DATE: 2000-10-05
SPINGR APPLICATION NUMBER: 09/680,728
PRIOR FILING DATE: 2000-10-05
SPINGR APPLICATION NUMBER: 09/680,728
PRIOR FILING DATE: 2000-10-05
SPINGR APPLICATION NUMBER: 09/680,728
PRIOR FILING DATE: 2000-10-05
SOFTWARE: PATENTING VOICE SEQ ID NOS: 2888
SSQ ID NO 1404
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 21;
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ADDRESSEE: Townsend and Townsend Khourie and Cr
STREET: Steuart Street Tower, One Market Plaza
CITY: San Francisco
STATE: California
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      COMPUTE: US
ZIP: 94105-1493
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   DB 15; 1 2.4e-06;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       0; Mismatches
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APPLICATION NUMBER: US/10/128,711
FILING DATE: 22-Apr-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Score 89;
Pred. No.
Sequence 1404, Application US/10001469
Publication No. US20030091562A1
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SETTE, Alessandro D.
CELIS, Esteban
GRAY, Howard
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CLASSIFICATION: <Unknown>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sequence 97, Application US/10128711 Publication No. US20030099634A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: VITIELLO, Maria A. CHESTNUT, Robert W.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   3 EKKIAKMEKASSVFNVVNS 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2 EKKIAKMEKASSVFNVVNS 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ORGANISM: Plasmodium falciparum US-10-001-469-1404
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   52.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NUMBER OF SEQUENCES: 153
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity 100.
Matches 19; Conservative
                                                                                 APPLICANT: JAKOBOVITS, AYA
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us-09-848-834a-12.rapb

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COTHER INFORMATION: Spacer peptide

JOTHER INFORMATION: Spacer peptide

JOCHER INFORMATION: (17)..(31)

OTHER INFORMATION: (177)..(31)

OTHER INFORMATION: (Tentoxylysin)

NAME/KEY: PEPTIDE

JOCATION: (32)..(37)

OTHER INFORMATION: Spacer peptide

JOCATION: (38)..(46)

OTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH hormone

US-09-848-834A-19
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Publication No. US20030068325A1
GENERAL INFORMATION:
APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: Immunogenic peptide composition as vaccines for the
TITLE OF INVENTION: prevention and treatment of Alzheimer's Disease
FILE REFERENCE: 1151-4167
CURRENT APPLICATION NUMBER: US/09/865,294
KURBER OF SEQ ID NOS: 76
SOFTWARE: PatentIn Ver. 2.0
                                                                                                                                                                                                                                                                                                                                                                         Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 23, Application US/09747802
Publication No. US20030027979a1
GENERAL INFORMATION:
APPLICANT: WANG, CHANG YI
TITLE OF INVENTION: SYNTHETIC PEPTIDE COMPOSITION AS IMMUNOGENS FOR TITLE OF INVENTION: PREVENTION OF URINARY TRACT INFECTION
FILE REPERENCE: 1151-4165
CURRENT APPLICATION NUMBER: US/09/747,802
CURRENT FILING DATE: 2000-12-22
NUMBER OF SEQ ID NOS: 88
SOFTWARE: Patentin Ver. 2.1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length 21;
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49.4%; Score 83.5; DB 9;
Best Local Similarity 65.4%; Pred. No. 3.9e-05;
Matches 17; Conservative 3; Mismatches 3;
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Pred. No. 2.7e-05;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                               20 KANSKFIGITELSSGPSLHWSYGLRP 45
                                                                                                                                                                                                                                                                                                                                                                                                                       10 KASSVF---NVVNSGPSLHWSYGLRP 32
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US-09-747-802-23
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94.7%;
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Best Local Similarity 94.7%;
Matches 18; Conservative
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Best Local Similarity 94.7
Matches 18; Conservative
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LENGTH: 21
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LENGTH: 21
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OCCATION: (1). (1)
NAME/KEY: MOD RES INFORMATION: Pyroglutamic acid or 5-oxoproline
NAME/KEY: MOD RES INCORATION: (46). (46)
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OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone
NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Length 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
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2.4e-06;
hes 0;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GENERAL INFORMATION:
APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102665-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR PILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SEQ ID NOS: 20
SEQ ID NO 19
LENGTH: 46
                   APPLICATION NUMBER: US 07/935,811
FILING DATE: 26-AUG-1992
APPLICATION NUMBER: US 07/874,491
FILING DATE: 27-APR-1992
APPLICATION NUMBER: US 07/827,682
FILING DATE: 29-APN-1992
APPLICATION NUMBER: US 07/749,568
FILING DATE: 26-AUG-1991
                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: PARMELGE, STEVEN W.
REGISTRATION NUMBER: 31,990
REFERENCE/DOCKET NUMBER: 14137-26-4
TELECOMMUNICATION INFORMATION:
TELEPHONE: (206) 467-9600
TELEFAX: (206) 623-6793
INFORMATION FOR SEQ ID NO: 97:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match 52.7%; Score 89; DB Best Local Similarity 100.0%; Pred. No. 2.4 Matches 19; Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE DESCRIPTION: SEQ ID NO: 97:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sequence 19, Application US/09848834A Patent No. US20020076416A1
    FILING DATE: 16-FEB-1994
                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 21 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EKKIAKMEKASSVFNVVNS 21
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY: unknown MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                            TYPE: amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY:
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0y 0b

Search completed: September 24, 2003, 17:33:08 Job time : 17.5457 secs

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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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OM protein - protein search, using sw model

Run on:

September 24, 2003, 17:30:06 ; Search time 11.6094 Seconds
(without alignments)
273.361 Million cell updates/sec

US-09-848-834A-12

Title: Perfect score:

169 1 DEKKIAKMEKASSVFNVVNSGPSLHWSYGLRPX 33 Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283308 seqs, 96168682 residues Searched:

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 200000000

Maximum Match 100% Listing first 45 summaries Post-processing: Minimum Match 0%

Database

pirl:* pir2:* pir3:* PIR_76:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

+[:::00		ap (SUMMARIES	
No.	Score	Match	Query Match Length	BB	ai	Description
1	82	48.5	388	7	A39756	circumsporozoite p
7	82	48.5	405	7	S05428	circumsporozoite p
m	82	48.5	412	7	OZZQAF	circumsporozoite p
4	82	48.5	424	7	A54533	circumsporozoite p
വ	æ	48.5	442	7	A54529	circumsporozoite p
9	56.5	33.4	. 92	٦	RHRTG	(B)
7	52		264	~	A44969	circumsporozoite p
80	52		332	٦	OZZÓMB	circumsporozoite p
σ	52		348	-	OZZQBK	circumsporozoite p
10	52		360	~	AD2528	integrase-recombin
11	52		367	Н	OZZOWY	circumsporozoite p
12	54		67	N	178541	
13	54		06	Н	RHMSG	
14	54		92	Н	RHHUG	
15	52		10	Н	RHPGG	
16	52		10	٦	RHSHG	٠
17	52		89	7	151423	gonadoliberin prec
18	52		994	~	096008	O.
19	51	30.2	91	~	JC7393	medaka-type gonado
20	51		429	~	A54504	circumsporozoite p
21	51		485	~	A60610	circumsporozoite p
22	51		507	~	H82378	probable long-chai
23	20		1484	~	C97196	probable membrane
24	20		2339	7	A45597	DNA-directed RNA p
25			630	N	A36359	VSG expression sit
56	49.5	29.3	630	N	S13724	8 protein
27	6		666	7	S15961	hypothetical prote
28	φ.		1265	7	S57968	Ran-binding protei
29		29.3	3176	Н	CGHU3 A	collagen alpha 3(V

beta-fructofuranos	integrin - fruit f	regulatory protein	gonadoliberin I -	hypothetical prote	gonadoliberin I pr	hypothetical prote	RhoGEF domain cont	hemocytin - silkwo	gonadotropin-relea	63K adducin-like p	hypothetical prote	hypothetical prote	noncapsid protein	hypothetical prote	hypothetical prote
S27373	S40311	BWUT8Q	RHAQ1	T43096	IS0644	T41554	T40088	S52093	I50739	JQ1036	AB1430	AH1803	UY PVME	F90563	A98196
~	~	_	Н	~	7	7	7	7	~	7	7	7	Н	7	7
532	1146	630	10	99	92	260	525	3133	86	562	664	664	668	2244	217
29.0	29.0	28.7	28.4	28.4	28.4	28.4	28.4	28.4	28.1	28.1	28.1	28.1	28.1	28.1	27.8
49	49	48.5	48	48	48	48	48	48	47.5	47.5	47.5	47.5	47.5	47.5	47
30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45

ALIGNMENTS

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Circumsporozoite protein - Plasmodium reichenowi
C;Species: Plasmodium reichenowi
C;Species: Plasmodium reichenowi
C;Species: Plasmodium reichenowi
C;Date: 14-Feb-1992 #sequence_revision 14-Feb-1992 #text_change 20-Aug-1999
C;Accession: A39756
R;Lal, A.A.; Goldman, I.F.
J. Biol. Chem. 266, 6686-6689, 1991
A;Title: Circumsporozoite protein gene from Plasmodium reichenowi, a chimpanzee malai A;Reference number: A39756; MUID:91201303; PMID:2016283
A;Accession: A39756
A;Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                      A;Cross-references: GB:M60972; NID:q160228; PIDN:AAA295561.1; PID:q160229 C;Superfamily: circumsporozoite protein; thrombospondin type 1 repeat homology F;312-366/Domain: thrombospondin type 1 repeat homology <THR1>
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Pred. No. 0.00083;
0; Mismatches 5; Indels
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78.3%;
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Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                          A; Molecule type: DNA
A; Residues: 1-388 <LAL>
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S05428
RESULT 1
A39756
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Circumsporozoite protein - malaria parasite (Plasmodium falciparum) (isolate NF54)
C;Species: Plasmodium falciparum
C;Species: Plasmodium falciparum
C;Species: 07-Jun-1990 #sequence_revision 07-Jun-1990 #text_change 09-Jun-2000
C;Accession: S05428; A45527; I60657
R;Campbell, J.R.
Nucleic Acids Res. 17, 5854, 1989
A;Title: DNA sequence of the gene encoding a Plasmodium falciparum malaria candidate
A;Reference number: S05428; MUID:89345189; PMID:2668895
A;Accession: S05428
A;Status: translation not shown

A. Molecule type: DNA A. Residues: 1-405 <CAM> A. Crossers ferences: BML:X15363 A. Crossers, P.; Gentz, R.; Matile, H.; Pink, J.R.; Sinigaglia, F. Mol. Biochem. Parasitol. 35, 185-190, 1989 A. Title: The circumsporozoite protein gene from NF54, a Plasmodium falciparum isolate A. Reference number: A45527; MUID:89364998; PMID:2671723 A. Status: preliminary

A;Cross-references: GB:M22982; GB:J04650; NID:g160168; PIDN:AAA29527.1; PID:g160169 R;Lockyer, M.J.; Marsh, K.; Newbold, C.I. A; Molecule type: DNA A; Residues: 1-405 <CAS>

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N'Alternate names: gonadoliberin-associated protein (GAP); gonadotropin releasing har N'Contains: gonadoliberin; prolactin release-inhibiting factor C; Species: Rattus norvegicus (Norway rat) c. Date: 31-Mar-1988 #sequence_revision 31-Mar-1988 #text_change 18-Jun-1999 C; Accession: A40147; B26173; A64810 R; Bond, C.T.; Hayflick, J.S.; Seeburg, P.H.; Adelman, J.P. Mol. Endocrinol. 3, 1257-1262, 1989 hormone: SH locus: structure and hypothalamm.c. A; Areference number: A40147; MUID:89384661; PMID:2476669
                                                                                                                                       circumsporozoite protein - malaria parasite (Plasmodium falciparum) (strain Wellcomze) (Syecies: Plasmodium falciparum) (c) Species: Plasmodium falciparum (c) Species: Date: 28-oct-1994 #sequence_revision 28-oct-1994 #text_change 09-Jun-2000 (C) Accession: A54529 (Strain A5452) (C) Accession: A54529 (Si Morbert, M.). Schwarz, R.1. (A) Strain variation in the circumsporozoite protein gene of Plasmodium falcipar A; Reference number: A54529; MUID:87115616; PMID:3543671 (A) Accession: A44529 (A) Strains; preliminary; not compared with conceptual translation
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: GB:M12579; NID:g204445; PIDN:AAA41263.1; PID:g204446
R;Maler, C.C.; Marchetti, B.; LeBoeuf, R.D.; Blalock, J.E.
Cell. Moll. Neurobiol. 12, 447-454, 1992
A;Title: Thymcoytes express a mRNA that is identical to hypothalamic luteinizing hcm
A;Reference number: A48410; MUID:93105480; PMID:1468115
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 A;Cross-references: GB:M15505; NID:g160214; PIDN:AAA29554.1; PID:g160215
C;Superfamily: circumsporozoite protein; thrombospondin type 1 repeat homology
C;Keywords: tandem repeat
F;366-420/Domain: thrombospondin type 1 repeat homology <THR1>
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A;Note: sequence extracted from NCBI backbone (NCBIN:121082, NCBIP:121083)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Cross-references: GB M31670; NID:g200447; PIDN:AAA41264.1; PID:g204448 R;Adelman, J.P.; Mason, A.J.; Hayflick, J.S.; Seeburg, P.H. Proc. Natl. Acad. Sci. U.S.A. 83, 179-183, 1986 A;Fitle: Isolation of the gene and hypothalamic cDNA for the common precu A;Reference number: A94090; MUID:86094338; PMID:2867548
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A;Residues: 1-92 <MAI>
A;Cross-references: GB:S50870; NID:9262059; PIDN:AAB24572.1; PID:9262060
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ; Db 2,
. 0.00097;
. 5; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            410 EKKICKMEKCSSVFNVVNSSIGL 432
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78.3%;
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Best Local Similarity 78.3
Matches 18; Conservative
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A; Residues: 1-442 <LOC>
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A; Residues: 1-92 <BON>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Circumsporozoite protein - malaria parasite (Plasmodium falciparum) (isolate IMTM22) (Species: Plasmodium falciparum C.Species: Plasmodium falciparum C.Species: Date: 15-Nov-1984 #sequence_revision 15-Nov-1984 #text_change 09-Jun-2000 C.Accession: A03388 Williams, J.L.; McCutchan, T.F.; Weber, J.L.; Wirtz, R.A.; Hochmeyer, W.T. Science 225, 593-599, 1984
A.F. Fizher C. Structure of the gene encoding the immunodominant surface antigen on the sporoz A.Reference number: A03388; MUID:84250215; PMID:6204383
A.Recession: A03388 MUID:84250215; PMID:6204383
A.Reciouse: 1-412 CDANA
A.Residues: 1-412 CDANA
A.Residues: 1-412 CDANA
A.Residues: 1-6 are the probable signal sequence
C.Comment: Residues 1-16 are the probable signal sequence
C.Comment: There are 41 copies of a 4-residue repeathe unit in the middle domain of the C.Superfamily: circumsporozotice protein; thrombospondin type 1 repeat homology CTHR1>
                                                  ep
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                                          cell
Mol. Biochem. Parasitol. 37, 275-280, 1989
A;Title: Wild isolates of Plasmodium falciparum show extensive polymorphism in T
A;Reference number: A60657; MUID:90114334; PMID:2481827
A;Accession: 160657
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Circumsporozoite protein - malaria parasite (Plasmodium falciparum) (strain T4, C; Species: Plasmodium falciparum (c; Species: Plasmodium falciparum (c; Species: Plasmodium falciparum (c; Species: 28-Oct-1994 #sequence_revision 28-Oct-1994 #text_change 09-Jun-2000 (c; Accession: A54533 R; del Portillo, H.A.; Nussenzweig, R.S.; Enea, V. Mol. Blochem. Parasitol. 24, 289-294, 1987 A; Title: Circumsporozoite gene of a Plasmodium falciparum strain from Thailand. A; Reference number: A54533 MID:87315205; PMID:3306373 A; Accession: A54533 A; Status: pre-liminary A; Molecule type: DNA A; Residues: 1-424 CDEL. A; Residues: 1-424 CDEL. A; Cross-references: GB:M19752; NID:9160216; PIDN:AAA29555.1; PID:9160217 C; Superfamily: circumsporozoite protein; thrombospondin type 1 repeat homology CTRR>
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                                                                                                                                A; Status: preliminary; not compared with conceptual translation A; Molecule type: DNA A; Molecule type: DNA A; Residues: 319-336,354-373 < LOC>
C; Superfamily: circumsporozoite protein; thrombospondin type 1 repeat homology F; 329-383/Domain: thrombospondin type 1 repeat homology
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Pred. No. 0.00088;
0; Mismatches 5; Indels
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78.3%; Pred. No. 0.00089;
.ive 0; Mismatches 5; Indels
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Pred. No. 0.00092;
0; Mismatches 5; Indels
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Best Local Similarity 78.3%;
Matches 18; Conservative
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Best Local Similarity 78.3
Matches 18; Conservative
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Best Local Similarity 78.3
Matches 18; Conservative
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common precursor of gam

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300 DTEICKMDKCSSIFNIVSN 318
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ilarity 47.4%;
Conservative
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Best Local Similarity 47.4
Matches 9; Conservative
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wes 9; Conserv
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Best Local S:
Matches 9,
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NiAlternate names: sporozotte grotes antigen
C; Species: Plasmodium berghei
C; Species: Plasmodium berghei
C; Species: Dlasmodium berghei
C; Species: Dlasmodium berghei
C; Species: 30-Sep-1987 # sequence_revision 28-Jul-1995 # text_change 16-Jul-1999
C; Accession: A44948; A25083; S13446
N; Lanar, D.E.
Mol. Blochem. Parasitol. 39, 151-154, 1990
A; Title: Sequence of the circumsporozoite gene of plasmodium berghei ANKA clone and NK65
A; Reference number: A44948; MUID:9018693; PMID:2406593
A; Molecule type: DNA
A; Residues: 1-332 CLDA
A; Cross-references: GB:N28887
A; Cross-references: GB:N28887
A; Eichinger, D.J.; Arnot, D.E.; Tam, J.P.; Nussenzweig, V.; Enea, V.
Mol. Cell. Biol. 6, 3865-3972, 1986
A; Title: Circumsporozoite protein of Plasmodium berghei: gene cloning and identification
A; Reference number: A25083; MUID:87089740; PMID:2432395
A; Molecule type: DNA
A; Residues: 1-26, 17, 28-68, PMIRR, 75-126, P, 128-134, PPPNANDP, 135-332 CEIC>
A; Cross-references: GB:M14135; NID:9160245; PIDN:AAA29577.1; PID:9160246
B; Weber, J.L.; Egan, J.E.; Lyon, J.A.; Whittz, R.A.; Charoenvit, Y.; Maloy, W.L.; Hockmey
B; Parasitol. 63, 295-300, 1987
A; Title: Plasmodium berghei: cloning of the circumsporozoite protein gene.
A; Reference number: S13446; MUID:87218962; PMID:3556207
A; Cross-reference number: S13446; MUID:87218962; PMID:3556207
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    C;Species: Plasmodium yoelil nigeriensis
C;Species: Plasmodium yoelil nigeriensis
C;Corcession: A44969; #sequence_revision 30-Sep-1993 #text_change 01-Dec-1995
C;Accession: A44969; Bnea, V.
R;Colomer-Gould, V.; Enea, V.
A;Ciomer-Gould, V.; Enea, V.
A;Itle: Plasmodium yoelil nigeriensis circumsporozoite gene structure and its implicati
A;Reference number: A44969; MUID:91148645; PMID:2290446
A;Accession: A44969
A;Status: preliminary
A;Molecule type: DNA
A;Residues: 1-264 <COL>
                                                                             #status predicted
from following gly
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C;Superfamily: circumsporozoite protein; thrombospondin type 1 repeat homology
F;190-242/Domain: thrombospondin type 1 repeat homology <THR1>
                                                      <PIF>
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                                                                                                                                                                                                                         Gaps
                         F;24-33/Product: gonadoliberin #status predicted <GLN>
F;37-92/Product: prolactin release-inhibiting factor #status predicted
F;24/Modified site: pyrrolidone carboxyli acid (Gln) (in mature form)
F;33/Modified site: amidated carboxyl end (Gly) (amide in mature form f

    Plasmodium berghei (strain NK65)

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0.72;
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  predicted <PGN>
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Pred. No. 3.9;
7; Mismatches 3
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                                                                                                                                                                                                                                                                                                                          4 IPKLMAAVVLLTVCLEGCSSQHWSYGLRP 32
                                                                                                                                                             Score 56.5;
Pred. No. 0.
F;24-92/Product: progonadoliberin #status
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A; Residues: 61-122, 'A', 124-332 <WEB>
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                                                                                                                                                               33.4%;
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                                                                                                                                                       Query Match
Best Local Similarity 48.3°
Matches 14; Conservative
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Best Local Similarity 47.4
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   circumsporozoite protein
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 8
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A;Cross-references: GB:M25445; NID:g160177; PIDN:AAA29531.1; PID:g160178
C;Comment: There are three distinct regions in the mature circumsporozoite protein, to oblo membrane-anchoring sequence.
C;Superfamily: circumsporozoite protein; thrombospondin type 1 repeat homology C;Reywords: sporozoite; surface antigen; tandem repeat
F;1-23/Domain: signal sequence #status predicted <SIG>
F;24-332/Product: circumsporozoite protein #status predicted <MAT>
F;94-189/Region: 8-residue repeats
F;99-230/Region: 2-residue repeats
F;258-310/Domain: thrombospondin type 1 repeat homology <THRI>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              integrase-recombinase protein [imported] - Nostoc sp. (strain PCC 7120) plasmid pcC71 C; Species: Nostoc sp. PCC 7120
C; Species: Nostoc sp. PCC 7120
C; Species: Nostoc sp. strain PCC 7120 is a synonym of Anabaena sp. strain PCC 7120
C; Date: 14-Dec-2001 #sequence_revision 14-Dec-2001 #text_change 09-Dec-2002
C; Accession: AD2528
R; Kaneko, T.; Nakamura, Y.; Wolk, C.P.; Kuritz, T.; Sasamoto, S.; Watanabe, A.; Irigu Nakazaki, N.; Shimpo, S.; Sugimoto, M.; Takazawa, M.; Yamada, M.; Yasuda, M.; Tabata NA Res. 8, 205-213, 2001
A; Title: Complete Genomic Sequence of the Filamentous Nitrogen-fixing Cyanobacterium A; Recession: AD2528
A; Accession: AD2528
A; Status: preliminary
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Nilternate names: sporozoite surface antigen
C;Species: Plasmodium berghei
C;Species: Plasmodium berghei
C;Date: 30-Jun-1991 #text_change 16-Jul-1999
C;Date: 30-Jun-1991 #sequence_revision 30-Jun-1991 #text_change 16-Jul-1999
C;Accession: S07873; S12571
R;Lockyer, M.J.; Davies, C.S.; Suhrbier, A.; Sinden, R.E.
Nucleof Acids Res. 18, 376, 1990
A;Tille: Nucleotide sequence of the Plasmodium berghei circumsporozoite protein gene
A;Reference number: S07873; MUID:90221834; PMID:2183186
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          - Plasmodium berghei (strain ANKA clone 2.34L)
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A.Molecule type: DNA
A.Molecule type: DNA
A.Molecule type: DNA
A.Fesidues: 1-348 <LLOC
B.Lockyer, M.J.
Submitted to the EMBL Data Library, November 1989
A.Reference number: S12571
A.Accession: S12571
A.Accession: S12571
A.Residues: 1-59, T', 61-81,83-348 <LCCC>
A.Cross-references: EMBL:X17606; NID:99784; PIDN:CAA35608.1; PID:99785
C.Superfamily: circumsporozoite protein; thrombospondin type 1 repeat homology
C.Reywords: tandem repeat
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F;21-348/Product: circumsporozoite protein #status predicted <MAT>
F;94-205/Region: 8-residue repeats
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 348;
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F;274-326/Domain: thrombospondin type 1 repeat homology <THR1>
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Pred. No. 5.3;
7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 55;
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N;Alternate names: gonadotropin-releasing hormone (GnRH); luteinizing hormone relead.
N;Conteains: gonadoliberin; gonadoliberin-associated protein (GAP)
C;Species: Mus musculus (house mouse)
C;Date: 31-Dec-1993 #sequence_revision 18-Mar-1997 #text_change 18-Jun-1999
C;Accession: A47578
R;Mason, A.J.; Hayfilck, J.S.; Zoeller, R.T.; Young III, W.S.; Phillips, H.S.; Niko_1 |
Science 234, 1366-1371, 1986
A;Titler A deletion truncating the gonadotropin-releasing hormone gene is responsible |
A;Reference number: A47578; MUID:87069928; PMID:3024317
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A.Description: gonadoliberin stimulates pituitary secretion of lutropin and follitrca. A.Note: gonadoliberin-associated protein may have prolactin release inhibiting activation gonadoliberin associated protein may have prolactin release inhibiting activation by superfamily; gonadoliberin to keywords: amidated carboxyl end; hormone; hypothalamus; pyroglutamic acid F.1-23/Domain: signal sequence #status predicted <SIGS F.22-31/Product: gonadoliberin #status predicted <SIGS F.35-90/Product: gonadoliberin-associated protein #status predicted <GAP> F.32/Wodified site: pyrrolidone carboxylic acid (GIN) (in mature form) #status predicted site: amidated carboxyl end (GIN) (amide in mature form from following-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Experimental source: hypothalamus
A; Experimental source: hypothalamus
A; Experimental source: hypothalamus
B; Seeburg, P.H.; Adelman, J.P.
Nature 311, 666-668, 1984
A; Title: Characterization of cDNA for precursor of human luteinizing hormone releasing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C; Species: Homo sapiens (man)
C; Date: 17-Mar-1987 #sequence_revision 21-Jul-1995 #text_change 08-Dec-2000
C; Date: 17-Mar-1987 #sequence_revision 21-Jul-1995 #text_change 08-Dec-2000
C; Accession: S05308; A26173; A93345, A90108; A01410; S45718
R; Hayflick, J.S.; Adelman, J.P.; Seeburg, P.H.
Nucleic Acids Res. 17, 6403-6404, 1989
A; Tille: The complete nucleotide sequence of the human gonadotropin-releasing hormone A; Reference number: S05308; MUID:89366682; PMID:2671939
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       gonadoliberin precursor (validated) - human
N'Alternate names: gonadotropin releasing hormone (GnRH); luteinizing hormone releas=
N'Contains: gonadoliberin-associated protein (GAP); progonadoliberin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Cross-references: EMBL:M14872; NID:g193576; PIDN:AAA37717.1; PID:g387175 C;Genetics: A;Introns: 45/3; 77/3 C;Function:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 54; DB 1
Pred. No. 1.6;
0; Mismatches
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90.0%;
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                                                                                              23 SLHWSYGLRP 32
                                                           23 SLHWSYGLRP
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Molecule type: DNA
                                                                                                                                                                                                     RESULT 13
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Circumaporozoite protein precursor - Plasmodium yoelii
Circumaporozoite protein precursor - Plasmodium yoelii
Circumaporozoite surface antigen
Cispecies: Plasmodium yoelii
Cispecies: Plasmodium yoelii
Cispecies: Plasmodium yoelii
Cipate: 30-Sep-1987 #sequence_revision 30-Sep-1987 #text_change 16-Jul-1999
Cipate: 30-Sep-1987 #sequence_revision 30-Sep-1987 #text_change 16-Jul-1999
Ribal, A.A.; de la Criz, V.F.; Welsh, J.A.; Charoenvit, Y.; Maloy, W.L.; McCutchan, T.F.
J. Biol. Chem. 262, 2937-2940, 1987
A.File: Structure of the gene encoding the circumsporozoite protein of Plasmodium yoell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            A:Creatures: 1.9.0. CLARLY COMMENT: A:CREATER COMMENT: A:CREATER COMMENT: A:CREATER COMMENT. There are three distinct regions in the mature circumsporozoite protein, the C:Comment: There are 15 copies of a 6-residue repeat and 8 copies of a 4-residue repeat. C:Comment: There are 15 copies of a 6-residue repeat and 8 copies of a 4-residue repeat. C:Superfamily: circumsporozoite protein; thrombospondin type 1 repeat homology C:Keywords: sporozoite; surface antigen; tandem repeat C:Keywords: sporozoite; surface antigen; tandem repeat F:20-367/Product: circumsporozoite protein #status predicted <NAT>
F:20-28/Region: 6-residue repeats (0-6-P-P)
F:229-260/Region: 4-residue repeats (0-6-P-P)
F:229-260/Region: thrombospondin type 1 repeat homology <PHRI>
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C; Date: 02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change 16-Jul-1999
C; Date: 02-Aug-1996 #sequence_revision 02-Aug-1996 #text_change 16-Jul-1999
C; Accession: 178841
R; Ma, Y. J.; Costa, M.E.; Ojeda, S.R.
Neuroendocrinology 60, 346-359, 1994
A; Title: Developmental expression of the genes encoding transforming growth factor alpha A; Reference number: 158134; MUID:95124501; PMID:7545971
A; Accession: 178541
A; Molecule type: mRNA
A; Residues: 1-67 < RES>
                                                                                                                                                                                                                                                                                                                   ö
                                        A;Cross-references: GB:AP003602; PIDN:BAB77154.1; PID:g17134596; GSPDB:GN00181 C;Genetics: strain PCC 7120
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C;Superfamily: gonadoliberin
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                                                                                                                                                                                                                                                        Length 360;
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                                                                                                                                                                                                                                                                                                          7; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3; Indels
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N;Alternate names: luteinizing hormone releasing hormone
                                                                                                                                                                                                                                                 DB 2;
5.5;
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32.0%; Score 54; DB 2;
Best Local Similarity 90.0%; Pred. No. 1.2;
Matches 9; Conservative 0; Mismatches
                                                                                                                                                                                                                                              Score 55; DB 2
Pred. No. 5.5;
9; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                            |::|||:|||:
| EREIAKLEKAAMAVDLQHNTNKMHW 188
                                                                                                                                                                                                                                                                                                                                                      2 EKKIAKMEKASSVFNVVNSGPSLHW 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  335 DTEICKMDKCSSIFNIVSN 353
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                                                                                                                                                                                                                                           32.5%;
36.0%;
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Conservative
                                                                                                                                                                                                                                  Query Match
Best Local Similarity 36.0 Matches 9; Conservative
A; Molecule type: DNA
A; Residues: 1-360 <KUR>
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Best Local Similarity
Matches 9; Conserv
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A; Residues: 1-367 <LAL>
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                                                                                                                                                                            A; Genome: plasmid
                                                                                                                                                   A;Gene: alr7511
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Gaps

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Length 10; 0; Indels

DB 1; 0.26;

30.8%; Sco. ... 100.0%; Pred. No. ... 0; Mismatches

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F;1/Modified site: pyrrolidone carboxylic acid (Gln) *status experimental F;10/Modified site: amidated carboxyl end (Gly) *status experimental
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       completed: September 24, 2003, 17:49:32 ne : 12.6094 secs
                                                                                                                                                                                                              Best_Local Similarity 100.
Matches 8; Conservative
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Job time
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                                                                                  A; Residues: 1-15, 'S', 17-92 <SEE>
A; Residues: 1-15, 'S', 17-92 <SEE>
A; Residues: 1-15, 'S', 17-92 <SEE>
A; Coorental surveing blacenta
A; Coorental surveing blacenta
Biochem: Biophys. Res. Commun. 109, 1061-1071, 1982
A; Title: The chemical identity of the immunoreactive LHRH-like peptide biosynthesized in A; Reference number: A90108; MUID: 83126573; PMID: 6760865
A; Molecule type: protein
A; Residues: 24-33 -TAAN
A; Residues: 24-33 -TAAN
A; Experimental source: placental trophoblasts
R; Leibovitz, D.; Roch, Y.; Pitzer, F.; Fridkin, M.; Dantes, A.; Baumeister, W.; Amsterda FEBS Lett. 346, 203-206, 1994
A; Title: Sequential degradation of the neuropeptide gonadotropin-releasing hormone by the Reference number: 845718; MUID: 94283597; PMID: 8013634
A; Contents: annotation; degradation pathway of synthetic hormone
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C:Species: Sus scrofa (domestica (domestica domestica 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Gene: GDB:GNRH: LHRH; GRH
A;Cross-references: GDB:133746; OMIM:227200; OMIM:152760
A;Map position: 8p21-8p11.2
A;Introns: 47/3; 79/3
C;Function: Gonadoliberin stimulates pituitary secretion of lutropin and follitropin A;Description: gonadoliberin stimulates pituitary secretion of lutropin and follitropin C;Superfamily: gonadoliberin
C;Superfamily: gonadoliberin
C;Superfamily: gonadoliberin
C;Superfamily: gonadoliberin
C;Reywords: amidated carboxyl end; hormone; hypothalamus; placenta; pyroglutamic acid
F;1-23/Domain: signal sequence #status predicted <SIG>F;24-92/Product: progonadoliberin #status predicted <PON>F;24-33/Product: gonadoliberin-associated protein #status predicted cGAP>F;24-33/Product: gonadoliberin-associated protein #status predicted cGAP>F;24/Modified site: pyrrolidone carboxyl end (Gly) (in mature form from following gly
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Ę
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A;Reference number: A93342; MUID:85012739; PMID:6090951
A;Accession: A93342
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GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
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OM protein - protein search, using sw model

September 24, 2003, 17:00:31; Search time 6.12465 Seconds (without alignments) 253.383 Million cell updates/sec Run on:

US-09-848-834A-12 169 1 DEKKIAKMEKASSVFNVVNSGPSLHWSYGLRPX 33 Title: Perfect score: Sequence:

Scoring table:

BLOSUM62 Gapop 10.0 , Gapext 0.5

127863 seqs, 47026705 residues Searched:

127863 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0% Maximum Match 100% Listing first 45 summaries

SwissProt_41:* Database : Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

	Description										P55247 macaca mula	mus	P49921 sus scrofa	P01148 homo sapien	P70074 pagrus majo		009163 mesocricetu		Q95335 tupaia glis				P13815 plasmodium	Q8d375 wiggleswort		P27625 plasmodium	P23799 trypanosoma		073812 morone saxa		Q24247 drosophila			
SUMMARIES	ID	CSP_PLARE	CSP_PLAFO	CSP_PLAFA	CSP_PLAFT	CSP_PLAFW	GON1_RAT	CSP_PLABE	CSP_PLABA	CSP_PLAYO	GON1_MACMU	GON1_MOUSE	GON1_PIG	GON1_HUMAN	GON1_PAGMA	GON1_SHEEP	GON1_MESAU	GON1_XENLA	GON1_TUPGB	DPO2_KLULA	GON1_CAVPO	CSP_PLABR	CSP_PLAMA	SYE_WIGBR	GON1_SPAAU	RPC1_PLAFA	ESA8_TRYBB	CA36_HUMAN	GON1_MORSA	INV4_YEAST	ITA1_DROME	ESA8_TRYEQ	- 1	GON1_CHICK
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Q9ia10 dicentrarch P98092 bombyx mori	P51918 haplochromi P27438 mink enteri	Q05764 rattus norv	Q91687 xenopus lae P96769 actinobacil	Q9sjp6 arabidopsis Q02724 saccharomyc	P07702 saccharomyc
GON1_DICLA HMCT_BOMMO	GON1_HAPBU VNCS_MEVA	ADDB_RAT	AFAR_RAEIN ITA4_XENLA YHBJ_ACTAC	FU10_ARATH ULP1_YEAST	LYS2_YEAST
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ALIGNMENTS

ALIGNMENTS	RESULT 1 CSP_PLARE ID CSP_PLARE STANDARD; PRT; 388 AA.		OS Plasmodium reichenowi. OC Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium. OX NCBL_TaxID=5854;		"Circumsporozoite chimpanzee malaria malaria			-	WOULD BE THE SURFACE ANTIGEN OF THE ORGANISM!- SIMILARITY: Contains 1 TSP type-1 domain.				CC or send an email to license@isb-sib.ch).	EMBL; M60972; AAA295 PIR; A39756; A39756.		DR Pfam: PF00090; tsp_1; 1. DR PRINTS; PR01303; CRMSPRZOITE. DR SWARM: SWAOOOO, medi in the company of the comp	PROSITE, PS50092; TSP1; 1.	KW Malaria; Sporozoite; Kepeat; Signal. FT SIGNAL 1 16 PROBABLE. FT CHAIN 17 388 CIRCUMSPOROZOITE PROTEIN. FT DOMAIN 120 267 62 X 4 AA TANDEM REPEATS OF N-A-N-P. FT DOMAIN 313 366 TSP TYPE-1.	SEQUENCE 388 AA;	Query Match 48.5%; Score 82; DB 1; Length 388; Best Local Similarity 78.3%; Pred. No. 0.00034; Matches 18; Conservative 0; Mismatches 5; Indels 0; Gaps 0;
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2 EKKIAKMEKASSVFNVVNSGPSL 24

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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.

MEDLINE-89364998; PubMed-2671723;

Caspers P., Gentz R., Matile H., Pink J.R., Sinigaglia F.;

"The circumsporozoite protein gene from NF54, a Plasmodium falciparum isolate used in malaria vaccine trials.";

Mol. Biochem. Parasaitol. 35:185-190(1989).

-IFUNCTION: THE CIRCUMSPORZOITE PROTEIN IS THE IMMUNDOMINANT SIRRACE ANTIGEN ON THE SPOROZOITE (THE INPECTIVE STACE OF THE MALARIA PARASITE THAT IS TRANSMITTED FROM THE MOSQUITO TO THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Campbell J.R.; "DNA sequence of the gene encoding a Plasmodium falciparum malaria candidate vaccine antigen."; Nucleic Acids Res. 17:5854-5854(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                         Davis J.R., Cortese J.F., Herrington D.A., Murphy J.R., Clyde D.F.,
Thomas A.W., Bagar S., Cochran M.A., Thanassi J., Levine M.M.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CIRCUMSPOROZOITE PROTEIN.
43 X 4 AA TANDEM REPEATS OF N-A-N-P.
                                                                                    CSP_PLAFO
P19597; Q25798;
01-FEB-1991 (Rel. 17, Created)
AMAY-2000 (Rel. 39, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Circumsporozoite protein precursor (CS).
Plasmodium falciparum (isolate NF54).
Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "Plasmodium falciparum: in vitro characterization and human infectivity of a cloned line."; Exp. Parasitol. 74:159-168(1992).
                                                                                                                                                                                                                                                                                                                                                               Campbell J.R.;
Submitted (JUL-1997) to the EMBL/GenBank/DDBJ databases.
PROBABLE.
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EMBL, M3886; AAA29521.1; --
EMBL, M22982; AAA29521.1; --
PTK, S05428; S05428
InterPro; IPR003067; Cromsprzoite.
InterPro; IPR000884; TSP1.
PRINTS; PR01303, CROMSPRZOITE.
SMART; SM00209; TSP1.1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PS50092; TSP1; 1.
Sporozoite; Repeat; Signal.
                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
MEDLINE=89345189; PubMed=2668895;
                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=92155298; Pubmed=1346766;
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                                                                                                                                                                                                              NCBI_TaxID=5843;
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                                                                                                                                                                                                                                                                                                                                                 REVISIONS
              356
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                                                                      SIGNAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Dame J.B., Williams J.L., McCutchan T.F., Weber J.L., Wirtz R.A., Hochmeyer W.T., Maloy W.L., Haynes J.D., Schneider I., Roberts D., Sanders G.S., Reddy E.P., Diggs C.L., Miller L.H.;
Structure of the gene encoding the immunodominant surface antigen on the sporozoite of the human malaria parasite Plasmodium falciparum."; Science 225:593-599 (1984).

-!-FUNCTION: THE CIRCUMSPOROZOITE PROTEIN IS THE IMMUNODOMINANT SURFACE ANTIGEN ON THE SPOROZOITE (THE INPECTIVE STAGE OF THE WIDENERS ANTIGEN ON THE STANDEN THE STAGE OF THE NUMBERS AND STAGE OF THE STANDEN STAGE OF THE NUMBERS AND STAGE OF THE STANDEN STAGE OF THE NUMBERS AND STAGE OF THE STAGE OF THE NUMBERS AND STAGE OF THE STAGE
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-!- SIMILARITY: Contains 1 TSP type-1 domain.
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41 X 4 AA TANDEM REPEATS OF P-N-A-N.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Circumsporozoite protein precursor (CS).
Plasmodium falciparum.
Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
                                                                                                      48.5%; Score 82; DB 1; Length 397; 78.3%; Pred. No. 0.00034; Live 0; Mismatches 5; Indels
  TSP TYPE-1.
A -> ANPNANPNA (IN REF. 4).
9E81146F59EBCEA3 CRC64;
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Pred. No. 0.00036;
....arthes 5; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                  21-JUL-1986 (Rel. 01, Created)
21-JUL-1986 (Rel. 01, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                               412 AA.
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InterPro; IPR003067; Cromsprzoite.
InterPro; IPR000884; TSP1.
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                                                   42646 MW;
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337 390 TS:
412 AA; 44420 MW;
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                                                                                                                                ilarity 78.3%;
Conservative
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Best Local Similarity 78.3
Matches 18; Conservative
322 37
194 19
397 AA;
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P02893;
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CONFLICT
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MEDLINE=87115616; PubMed=3543671;
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367 4
442 AA;
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                                                          falciparum."
Mol. Biochem
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P07490;
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Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MISCELLANBOUS: THE C-TERMINAL REGION IS PROBABLY USED FOR ANCHORING THE PROTEIN TO THE CELL MEMBRANE. THE REPEAT SEQUENCES WOULD BE THE SURFACE ANTIGEN OF THE ORGANISM.
                                                                                                                                                                                                                                                                                                                                                                      MOI. Biochem. Parasitol. 24:289-294(1987).
-!- FUNCTION: THE CIRCUMSPOROZOITE PROTEIN IS THE IMMUNODOMINANT
SURFACE ANTIGEN ON THE SPOROZOITE (THE INFECTIVE STAGE OF THE
MALARIA PARASITE THAT IS TRANSMITTED FROM THE MOSQUITO TO THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CIRCUMSPOROZOITE PROTEIN.
45 X 4 AA TANDEM REPEATS OF N-A-N-P.
TSP TYPE-1.
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                                                                                                                                                                                                                                                                                                           del Portillo H.A., Nussenzweig R.S., Enea V.; "Circumsporozoite gene of a Plasmodium falciparum strain from
                                                                                             01-JAN-1990 (Rel. 13, Created)
01-JAN-1990 (Rel. 13, Last sequence update)
28-FBB-2003 (Rel. 41, Last annotation update)
Circumsporczoite protein precursor (CS)
Plasmodium falciparum (isolate 44 / Thalland).
Eukaryota, Alveolata; Apicomplexa; Haemosporida; Plasmodium.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
NCBL_TaxID=5848;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 48.5%; Score 82; DB 1; Length 424; 11arity 78.3%; Pred. No. 0.00037; Conservative 0; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            710AB14238786CD9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-AUG-1988 (Rel. 08, Created)
01-AUG-1988 (Rel. 08, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Circumsporozoite protein precursor (CS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               -1- SIMILARITY: Contains 1 TSP type-1 domain.
                                                            424 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       442 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Plasmodium falciparum (isolate Wellcome).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 EKKIAKMEKASSVFNVVNSGPSL 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PIR; AS4533; A54533.
InterPro; IPR003067; Cromsprzoite.
InterPro; IPR000884; TSP1.
                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A. MEDLINE-87315205; PubMed=3306373;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Pfan: PF00090; tsp_1; 1.
PRINTS; PR01303; CRCMSPRZOITE.
SWART; SW00209; TSP1; 1.
PROSITE; PS50092; TSP1; 1.
Malaria; Sporozoite; Repeat; Siç
SIGNAL 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                123 300 4
349 402 T
424 AA; 45610 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; M19752; AAA29555.1; -.
                                                            STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                             VERTEBRATE HOST)
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es 18; Conserv
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SEQUENCE FROM N.A.
                                                                                                                                                                                                                             NCBI_TaxID=5846;
                                                                                                                                                                                                                                                                                                                                                    Thailand."
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P08307;
                                                            CSP_PLAFT
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                 RESULT 4
CSP_PLAFT
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                                                                              DPTTOPENTARY REPRESENTATION OF STREET AND DESCRIPTION OF STREET AND DE
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01-ARR-1988 (Rel. 07, Last sequence update)
28-FBB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor (Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GNRH I) (Luliberin I); Prolactin release-inhibiting factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Adelman J.P., Mason A.J., Hayflick J.S., Seeburg P.H.; "Isolation of the gene and hypothalamic cDNA for the common precursor of gonadotropin-releasing hormone and prolactin release-inhibiting factor in human and rat." Proc. Natl. Acad. Sci. U.S.A. 83:179-183(1986).
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostom1;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Rattus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                          -!- MISCELLANEOUS: THE C-TERMINAL REGION IS PROBABLY USED FOR ANCHORING THE PROTEIN TO THE CELL MEMBRANE. THE REPEAT SEQUENCES WOULD BE THE SURFACE ANTIGEN OF THE ORGANISM.
Lockyer M.J., Schwarz R.T.; "Strain variation in the circumsporozoite protein gene of Plasmodium
                                                                                       CIRCUMSPOROZOITE PROTEIN.
47 X 4 AA TANDEM REPEATS OF N-A-N-P.
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Pred. No. 0.00039;
5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TSP TYPE-1.
BD57A9A152B85E03 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            92 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         410 EKKICKMEKCSSVFNVVNSSIGL 432
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PROSITE; PS50092; TSP1; 1.
Malaria; Sporozoite; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2 EKKIAKMEKASSVFNVVNSGPSL 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PIR; A54529; A54529.
InterPro; IPR003067; Crcmsprzoite.
InterPro; IPR000884; TSP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
MEDLINE=86094338; PubMed=2867548;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pfam; PF00090; tsp_1; 1. PR1NTS; PR01303; CRCMSPRZOITE. SMART; SM00209; TSP1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         420 T
47402 MW;
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Local Similarity 78.3%;
es 18; Conservative (
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Eukaryota;
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SEQUENCE
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P23093;
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        δλ
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ä
                                                                                                                                                                                                               SCIENCE 235:1514-1517(1987).
-1- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Pfam; PF00446; GnRH; 1.
PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS06473; GNRH; 1.
Cleavage on pair of basic_residues; Hormone; Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                Adelman J.P., Bond C.T., Douglass J., Herbert E., "Two mammalian genes transcribed from opposite strands of the same
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
C.T., Hayflick J.S., Seeburg P.H., Adelman J.P., rat gonadotropin-releasing hormone: SH locus: structure and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AMIDATION (G-34 PROVIDE AMIDE GROUP). 494B5C64DA8A3EB3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PROLACTIN RELEASE-INHIBITING FACTOR
                                                                                        Maler C.C., Marchetti B., Leboeuf R.D., Blalock J.E.;
"Thymocytes express a mRNA that is identical to hypothalamic
luteinizing hormone-releasing hormone mRNA.";
Cell. Mol. Neurobiol. 12:447-454(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 56.5; DB 1; Length 92; Pred. No. 0.33;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PYRROLIDONE CARBOXYLIC ACID.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                   HORMONES.
-1 SUBCELLULAR LOCATION: Secreted.
-1 TISSUE SPECIFICITY: CENTRAL NERVOUS SYSTEM.
-1 SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            339 AA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PIR; A40147; RHRTG.
InterPro; IPR002012; GnRH.
InterPro; IPR004079; Gonadoliberini.
                     hypothalamic expression.";
Mol. Endocrinol. 3:1257-1262(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; M15528; -; NOT_ANNOTATED_CDS.
                                                                                                                                                                                                                                                                                                                                                                                                             EMBL; M12579; AAA41263.1; -. MBLE; M31670; AAA41264.1; -. EMBL; M31527; AAA41341.1; ALT_SEQ. EMBL; M15529; AAA42139.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                            MEDLINE=93105480; PubMed=1468115;
                                                                                                                                                                  MEDLINE=87149087; PubMed=3547652;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CST_PLABE STANDARD; F P06915; 01-JAN-1988 (Rel. 06, Created)
                                                                                                                                                                                                                                                                                                                                                                                                EMBL; S50870; AAB24572.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       10500 MW;
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                                                                                                                                               SEQUENCE OF 1-47 FROM N.A.
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33
26
26
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                                                       SEQUENCE FROM N.A.
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SIGNAL
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MOD_RES
SEQUENCE
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PEPTIDE
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                                                                                                                                                                                                                                                                                                                                                                                                      -1- MISCELLANEOUS: THE C-TERMINAL REGION IS PROBABLY USED FOR ANCHORING THE PROTEIN TO THE CELL MEMBRANE. THE REPEAT SEQUENCES WOULD BE THE SUFFACE ANTIGEN OF THE ORGANISM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                                                                                                                                                            MEDILINE-87089740; PubMed=2432395; Eichinger D.J., Arnot D.E., Tam J.P., Nussenzweig V., Enea V.; Eichinger D.J., Arnot D.E., Tam J.P., Nussenzweig V., Enea V.; "Circumsporozotte protein of Plasmodium berghei: gene cloning and indentification of the immunodominant epitopes."; Mol. Cell. Biol. 6:3865-3972(1986).

-!- FUNCTION: THE CIRCUMSPOROZOTTE PROTEIN IS THE IMMUNODOMINANT SURFACE ANTIGEN ON THE SPOROZOTTE (THE INFECTIVE STAGE OF THE MALARTA PRAREAITE THAT IS TRANSMITTED FROM THE MOSQUITO TO THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SECUENCE FROM N.A.
MEDLINE-90221834; PubMed-2183186;
Lockyre M.J. Davies C.S., Suhrbier A., Sinden R.E.;
"Nucleotide sequence of the Plasmodium berghei circumsporozoite
protein gene from the ANKA clone 2.34L.";
Nucleic Acids Res. 18:376-376(1990).
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16 X 2 AA TANDEM REPEATS OF P-Q.
                                                                                         Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
NCBI_TaxID=5821;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Alveolata; Apicomplexa; Haemosporida; Plasmodium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 55; DB 1; Length 339;
Pred. No. 2.2;
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                         update)
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01-NOV-1991 (Rel. 20, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Last sequence update)
Last annotation update
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                347 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7; Mismatches
                                           Circumsporozoite protein precursor (CS)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TSP TYPE-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Signal.
PROBABLE.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Circumsporozoite protein precursor (CS)
Plasmodium berghei (strain Anka).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR003067; Crcmsprzoite.
InterPro; IPR000804; TSP1.
Pfam; PP00090; tsp.1; 1.
PRINTS; PR01303; CRCMSPRZOITE.
SWART; SW00209; TSP1; 1.
PROSITE; PS50092; TSP1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  307 DTEICKMDKCSSIFNIVSN 325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 EKKIAKMEKASSVFNVVNS 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ΜM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; M14135; AAA29577.1; -. PIR; A44948; OZZQMB.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Query Match 32.5%;
Best Local Similarity 47.4%;
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         37138
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              196
238
                 28-FEB-2003 (Rel. 41,
                                                                                                                                                                                                                                                                                                                                                                                       VERTEBRATE HOST)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            93
206
266
339 AA;
                                                                     Plasmodium berghei
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=5823;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
                                                                                       THE REPEAT SEQUENCES
 FUNCTION: THE CIRCUMSPOROZOITE PROTEIN IS THE IMMUNODOMINANT SURFACE ANTIGEN ON THE SPOROZOITE (THE INFECTIVE STAGE OF THE MALARIA PARASITE THAT IS TRANSMITTED FROM THE MOSQUITO TO THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -!- FUNCTION: THE CIRCUMSPOROZOITÈ PROTEIN IS THE IMMUNODOMINANT SURFACE ANTIGEN ON THE SPOROZOITE (THE INFECTIVE STAGE OF THE MALARIA PARASITE THAT IS TRANSMITTED FROM THE MOSQUITO TO THE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ŚEĞUENCE FROM N.A.
MEDLINE-81137555; PubMed-3102479;
MED A.A., de la Cruz V.F., Welsh J.A., Charoenvit Y., Maloy W.L.,
McCutchan T.F.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Structure of the gene encoding the circumsporozoite protein of Plasmodium yoelii. A rodent model for examining antimalarial sporozoite vaccines.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                VERTEBRATE HOST).
MISCELLANEOUS: THE C-TERMINAL REGION IS PROBABLY USED FOR ANCHORING THE PROTEIN TO THE CELL MEMBRANE. THE REPEAT SEW WOULD BE THE SURFACE ANTIGEN OF THE ORGANISM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
NCBI_TaxID=5862;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         de la Cruz V.F., Lal A.A., McCutchan T.F.; "Variation among circumsporozoite protein genes from rodent
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 55; DB 1; Length 347; Pred. No. 2.2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL.
CIRCUMSPOROZOITE PROTEIN.
13 X 8 AA REPEATS.
17 X 2 AA REPEATS OF P-Q.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   OEC240EE35681AF8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-JAN-1988 (Rel. 06, Created)
01-JAN-1988 (Rel. 06, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
                                                                                                                     SIMILARITY: Contains 1 TSP type-1 domain.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           367 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Circumsporozoite protein precursor (CS). Plasmodium berghei yoelii.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Biochem. Parasitol. 28:31-38(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TSP TYPE-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 1-140 AND 260-367 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                               Signal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Biol. Chem. 262:2937-2940(1987).
FUNCTION: THE CIRCUMSPOROZOITE
                                                                                                                                                                                                                                                                                                      PIR; S07873; OZZOBK.
InterPro; IPR003067; Crcmsprzoite.
InterPro; IPR000884; TSP1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE-88232798; PubMed=3287156;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         315 DTEICKMDKCSSIFNIVSN 333
                                                                                                                                                                                                                                                                                                                                      InterPro; IPR000884; TSP1.
Pfam: PF00099; tsp_1; 1.
PRINTS: PR01303; CRCMSPRZOITE.
SMART: SM00209; TSP1; 1.
PROSITE: PS50092; TSP1; 1.
Malaria; Sporozoite; Repeat; Sig
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 EKKIAKMEKASSVFNVVNS 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   37776 MW;
                                                                                                                                                                                                                                                                                        EMBL; X17606; CAA35608.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Ouery Match 32.5%;
Best Local Similarity 47.4%;
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               347
204
247
325
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               VERTEBRATE HOST).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              214 2
274 3
347 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              malarias."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CSP_PLAYO
P06914;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       RESULT 9
CSP_PLAYO
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          -1- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                       CIRCUMSPOROZOITE PROTEIN.
15 X 6 AA TANDEM REPEATS OF Q-G-P-G-A-P.
8 X 4 AA TANDEM REPEATS OF Q-Q-P-P.
TSP TYPE-1.
-i- MISCELLANEOUS: THE C-TERMINAL REGION IS PROBABLY USED FOR ANCHORING THE PROTEIN TO THE CELL MEMBRANE. THE REPEAT SEQUENCES WOULD BE THE SURRACE ANTICEN OF THE ORGANISM.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDLINE=95124501; PubMed=7545971;
Ma Y.J., Costa M.E., Ojeda S.R.;
"Developmental expression of the genes encoding transforming growth factor alpha and its receptor in the hypothalamus of female rhesus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-0CT-1996 (Rel. 34, Created)
01-0CT-1996 (Rel. 34, Last sequence update)
01-0CT-1996 (Rel. 41, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I]
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 55; DB 1; Length 367;
Pred. No. 2.4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    3; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 1EA56AFF7FFCB5E3 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            -!- SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         67 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    7; Mismatches
                                                                                                                                                                                                                   EMBL; J02695; AAA29558.1; -.
EMBL; M18821; AAA29559.1; -.
EMBL; M22698; AAA29560.1; -.
InterPro; IPR003067; Cromsprzoite.
InterPro; IPR00984; TSP1.
PRINTS; PR01303; CRCMSPRZOITE.
SMART; SM00209; TSP1; 1.
                                                                                                                                                                                                                                                                                                                                                                            Malaria; Sporozoite; Repeat; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           macaques.";
Neuroendocrinology 60:346-359(1994)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ::| ||:| ||:||:|:::
335 DTEICKMDKCSSIFNIVSN 353
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Macaca mulatta (Rhesus macaque).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 EKKIAKMEKASSVFNVVNS 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  38888 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   32.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 47.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                         SMART; SM00209; TSP1; 1.
PROSITE; PS50092; TSP1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cercopithecinae; Macaca,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (Fragment).
GNRH1 OR GNRH OR LHRH.
                                                                                                                                                                                                                                                                                                                                                                                                             20
139
229
294
367 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TISSUE=Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Best Local Similarity
Matches 9: Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=9544;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GON1_MACMU P55247;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
                                                                                                                                                                                                                                                                                                                                                                                                SIGNAL
                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                DOMAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DOMAIN
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EMBL; M14872; AAA37717.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                90 AA; 10337 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            32.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              .08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SYNTHESIS OF GONADOLIBERIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      23 SLHWSYGLRP 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SQHWSYGLRP 30
                                                                                                                      PIR; A47578; RHMSG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Similarity 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                   22
22
35
24
                                                                                                                                                                                                                                                                                                                                                                                                                                       22
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local S
Matches 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                         MOD_RES
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                PEPTIDE
PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                           ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GON1_PIG
P49921;
                                                                                                                                                                                                                                                                                                                                                                                                                                       MOD_RES
                                                                                                                                                                                                                                                                                                               SIGNAL
                                                                                                                                                                                                                                                                                                                                 CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GON1_PIG
                                 Q
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            g
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01-JAN-1990 (Rel. 13, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
[Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (Gnadotropin-releasing factor
                                                                                                                                                                                                                                   PRINTS; PRO1541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus;
Signal; Pyrrolidone carboxylic acid.
NON TER 1 1
SIGNAL <1 5 RY SIMILARIAN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SIMILARIIY).
SIMILARIIVN (G-16 PROVIDE AMIDE GROUP) (BY
SIMILARIIY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE-88706928; PubMed-3024317; Mason A.J., Hayflick J.S., Zoeller R.T., Young W.S. III, Mason A.J., Hayflick J.S., Zoeller R.T., Young W.S. III, Phillips H.S., Nikolics K., Seeburg P.H.; Adeletion truncating the gonadcropin-releasing hormone gene is science 234:1366-1371(1986).

-!- FUNCTION: STIMILATES THE SECRETION OF GONADOTROPINS; IT STIMULATES HORMONES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                         GONADOLIBERIN I.
GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               .
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                       ACTIVITY (BY SIMILARITY).
PYRROLIDONE CARBOXYLIC ACID (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 54; DB 1; Length 67;
Pred. No. 0.54;
0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  505394DAA261A3F2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                           PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         90 AA.
                                                                                                                                                                                                                                                                                                                                                     BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SUBCELLULAR LOCATION: Secreted.
SIMILARITY: Belongs to the GRRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SIMILARITY)
                                                                                                                                                 PIR; 178541; 178541.
InterPro; IPR002012; GRH.
InterPro; IPR004079; GonadoliberinI.
                                                                                                                               EMBL; S75918; AAB33096.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        32.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           7573 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                   Pfam; PF00446; GnRH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                    >67
15
>67
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              67 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Local Similarity
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P13562;
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SEQUENCE
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GONI_MOUSE
AC D136AN
DT 01-JAN
DT 28-BY
DE Program
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DE hormon
DE (Luteli)
DE Muss mus
CC Bukary
CC Bukary
CC Bukary
CC Mammal
OX NCBL TR
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RA MASON
RA MASON
RA MASON
CC TI-SI
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Matches
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entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                    Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDINE=72065376; PubMed-4947726;
Matsuo H., Arinura A., Nair R.M.G., Schally A.V.;
"Synthesis of the porcine LH- and FSH-releasing hormone by the solid-
phase method.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDLINE-72117544; PubMeda4946275;
Baba Y., Arimura A., Schally A.V.;
"On the tryptophan residue in porcine LH and FSH-releasing hormone.";
Biochem. Biophys. Res. Commun. 45:483-487(1971).
                                                                                                                                                                                                                                                                                                     APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                   PYRROLIDONE CARBOXYLIC ACID.
AMIDATION (G-32 PROVIDE AMIDE GROUP).
1C0766FA4826E4D9 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       01-0CT-1996 (Rel. 34, Created)
01-0CT-1996 (Rel. 34, Last sequence update)
01-0CT-1996 (Rel. 41, Last sequence update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I) (Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I].
                                                                                                                                                                                                                                                                     GONADOLIBERIN I.
PROLACTIN RELEASE-INHIBITING FACTOR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sus scrofa (Pig).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae; Sus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 24-33.

MEDLINE=72114303; PubMed=4946067;
Baba Y., Matsuo H., Schally A.V.;
"Structure of the porcine LH- and FSH-releasing hormone. II., confirmation of the proposed structure by conventional sequential
                                                                                                                                                                                                                                                                                                                                                                                                                                                    ;
                                                                                                                                                                                                                                                                                                                                                                                                               1; Length 90;
                                                                                                                                                                                                                                                                                                                                                                                                                                              1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TISSUE-Hypothalamus;
Weesner G.D., Matteri R.L., Becker B.A.;
Submitted (MAY-1994) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                 PROGONADOLIBERIN I.
                                                                              InterPro; Impos.
InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
Pfam; PF00446; GnRH; 1.
PROSITE; PR00473; GNRH; 1.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Ar
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Blochem. Blophys. Res. Commun. 45:822-827(1971).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Biochem. Biophys. Res. Commun. 44:459-463(1971).
                                                                                                                                                                                                                                                                                                                                                                                                           Score 54; DB 1
Pred. No. 0.74;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     91 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                           0; Mismatches
                                                                                                                                                                                                                                                                                                                        ACTIVITY
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Lander E.S.;
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    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@lb.sib.ch).
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FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                       InterPro; IPR002012; GRH.
InterPro; IPR004079; GonadoliberinI.
InterPro; IPR004079; GonadoliberinI.
Pfam; PF004046; GRH, 1.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus; Placenta; Signal; Pyrrolidone carboxylic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE-86094338; PubMed-2867548; Adelman J.P., Mason A.J., Hayflick J.S., Seeburg P.H.; Isolation of the gene and hypothalamic cDNA for the common precursor of gonadotropin-releasing hormone and prolactin release-inhibiting factor in human and rat.",
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Hayflick J.S., Adelman J.P., Seeburg P.H.; "The complete nucleotide sequence of the human gonadotropin-releasing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     GONADOLIBERIN I.
GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AMIDATION (G-34 PROVIDE AMIDE GROUP). 8340474F32DDAA99 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-APR-1988 (Rel. 07, Last sequence update)
28-FSB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Lutelnizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GnRH I) (Luliberin I) (Gonadotropin-seleasing hormone I)
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Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 54; DB 1; Length 91;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Proc. Natl. Acad. Sci. U.S.A. 83:179-183(1986).
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0; Mismatches
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                                                        -!- SUBCELLULAR LOCATION: Secreted.
-!- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hormone gene.";
Nucleic Acids Res. 17:6403-6403(1989).
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SEQUENCE FROM N.A.
MEDLINE=89366682; Pubmed=2671939;
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                                                                                                                                                                                                                                                                                            EMBL; L32864; AAA31066.1; -.
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90.0%;
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GNRH1 OR GNRH OR LHRH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Best Local Similarity
Matches 9; Conserv
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SEQUENCE FROM N.A.
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SEQUENCE
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PEPTIDE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NAT. Genet. 23:373-373(1999).
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Characterization of single-nucleotide polymorphisms in coding regions
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MIM; 152760; — .: Soluble fraction; TAS.

GO; GO:0005525; C:soluble fraction; TAS.

GO; GO:00072183; F:luteinizing hormone-releasing factor activity; TAS.

GO; GO:0007275; P:development; TAS.

GO; GO:0007275; P:negative regulation of cell proliferation; TAS.

GO; GO:0071275; P:negative regulation of rell proliferation; TAS.

InterPro; IPR004079; GonadoliberinI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Cargill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N., Shaw N., Lane C.R., Lim B.P., Kalyanaraman N., Nemesh J., Zlaugra L., Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.Q.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Shaw N., Lane C.R., Lim B.P., Kalyanaraman N., Nemesh J., Zlaugra L., Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.Q.,
                                            Seeburg P.H., Adelman J.P.; "Characterization of cDNA for precursor of human luteinizing hormone releasing hormone.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PHARMACEUTICAL: Available under the names Factrel (Ayerst Labs), Lutrepulse or Lutrelef (Ferring Pharmaceuticals) and Relisorm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Cargill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GONADOLIBERIN I.
GNRH -ASSOCIATED PEPTIDE I.
APPERS TO BE ESSENTIAL FOR BIOLOGICAL
ACTIVITY.
                                                                                                                                                                                                                                                                                                        MEDLINE-83126573; PubMed-6760865;
Tan L., Rousseau P.;
"The chemical identity of the immunoreactive LHRH-like peptide
                                                                                                                                                                                                                                                                                                                                                                                                                        biosynthesized in the human placenta.";
Biochem. Biophys. Res. Commun. 109:1061-1071(1982).
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Pyrrolidone carboxylic acid.
SIGNAL
1 23
CHAIN 24 92
PROGONADOLIBERIN I.
PEPTIDE 37 92
GNRH-ASSOCIATED PEE
ACT_SITE 26 26
APPEARS TO BE ESSEN
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SEQUENCE FROM N.A., AND VARIANT SER-16.
MEDLINE-85012739; PubMed=6090951;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SUBCELLULAR LOCATION: Secreted.
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                                                                                                                                                                                        Nature 311:666-668(1984)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            of human genes.
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                                                                                                                        Gaps
                                                                                                                                                                                                                                                                 15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Gonadoliberin I precursor (Gonadotropin-releasing hormone I) (GnRH-I)
(LH-RH I) (Luliberin I).
                                                                                                                                                                                                                                                                                                                                                   Pagrus major (Red sea bream) (Chrysophrys major).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRINTS; PRO1541, GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus; Signal; Multigene family; Pyrrolidone carboxylic acid.
1 23 POTEMBIA.
 PYRROLIDONE CARBOXYLIC ACID.
AMIDATION (G-34 PROVIDE AMIDE GROUP).
W -> S (IN dbSNP:6185).
FTIG=VAR.013943.
30A72221B076FA79 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Okuzāwa K., Granneman J., Bogerd J., Goos H., Zohar Y., Kagawa H.; Submitted (SEP-1996) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      GONADOLIBERIN I.
GNRH-ASSOCIATED PEPTIDE I (POTENTIAL).
PYRROLIDONE CARBOXYLIC ACID (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AMIDATION (G-34 PROVIDE AMIDE GROUP)
                                                                                                                       0;
                                                                                       Score 54; DB 1; Length 92; Pred. No. 0.76;
                                                                                                                     1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Score 54; DB 1; Length 95; Pred. No. 0.78;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          61E79C990328D73E CRC64;
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                                                                                                                                                                                                                                           . 95 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 -1- SUBCELLULAR LOCATION: Secreted.
-1- SIMILARITY: Belongs to the GNRH family.
                                                                                                                  0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY
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InterPro; IPR004079; GonadoliberinI.
                                                          10380 MW;
                                                                                      32.0%;
90.0%;
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                                                                                               Local Similarity 90.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          EMBL; D86582; BAA13129.1;
                                                                                                                                                                                                                                            STANDARD;
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Best Local Similarity 52.6
Matches 10; Conservative
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33
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                                                                                                                                          23 SLHWSYGLRP 32
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                                                          92 AA;
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TISSUE=Brain;
                                                                                                                                                                                                                                                                                                                                                                                                             Sparidae; Pagrus.
NCBI_TaxID=143350;
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P70074;
                                                        SEQUENCE
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STIMULATES
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                                                                                                                                                                                                                                                                                                                                                                          Burgus R., Butcher M., Amoss M., Ling N., Monahan M., Rivier J.,
Pellows R., Blackwell R., Vale W., Guillemin R.;
"Primary structure of the ovine hypothalamic luteinizing hormone-
releasing factor (LRF) (LH-hypothalamus-LRF gas chromatography-mass
spectrometry-decapeptide-Edman degradation).";
Proc. Natl. Acad. Sci. US.A. 69:278-283(1972).
-!-FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULAT
THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                               Ovis aries (Sheep).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                     15-DEC-1998 (Rel. 37, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AMIDATION (G-11 PROVIDE AMIDE GROUP).
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Submitted (OCT-1993) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 52; DB 1; Length 61;
Pred. No. 0.95;
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                                   61 AA.
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                                                                                                                                                                                                                                                                     SEQUENCE OF 12-61 FROM N.A.
STRAIN-Western range; TISSUE-Hypothalamus;
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Cleavage on pair of basic residues; Ho
Placenta; Pyrrolidone carboxylic acid.
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InterPro; IPR004079; GonadoliberinI.
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SEQUENCE OF 1-10.
MEDLINE-72094314; Pubmed=4550508;
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100.0%; Pre-
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                                GON1_SHEEP
                                                                                                                                                     (Fragment)
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GON1_SHEEP
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Search completed: September 24, 2003, 17:41:18 Job time: 6.22465 secs

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Chen H.H., Yu X B., Wu Z.D., Xu J.;
Chen H.H., Yu X B., Wu Z.D., Xu J.;
Gene cloning of circumsporozoite protein (CSP) II gene from Plasmodium falciparum (FCCI/HN).";
Submitted (MAR-2002) to the EMBL/GenBank/DDBJ databases.
EMBL, ANO93672, AAM19072.1;
InterPro; IPR000884; TSP1.
Pfam; PF000967; Crcmsprzoite.
Prins; PR001303; CRCMSPRZOITE.
SMART; SM00209; TSP1; 1.
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NCBI_TaxID=5833;
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Pred. No. 0.00026;
0; Mismatches 5; Indels
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Last annotation update)
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Q819H5
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78.3%;
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 Plasmodium falciparum
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Matches 18
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266.163 Million cell updates/sec
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Copyright (c) 1993 - 2003 Compugen Ltd.
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1 DEKKIAKMEKASSVFNVVNSGPSLHWSYGLRPX 33
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Maximum DB seq length: 2000000000
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Jongwutiwes S., Tanabe K., Hughes M.K., Kanbara H., Hughes A.L.;
"Allelic variation in the circumsporozoite protein of Plasmodium
falciparum from Thai field isolates.";
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Eukaryota, Alveolata; Apicomplexa; Haemosporida; Plasmodium.
NCBI_TaxID=5833;
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Bukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
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                                01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-OCT-2002 (TrEMBLrel. 22, Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-1996 (TrEMBLrel. 01, Created)
01-NOV-1996 (TrEMBLrel. 01, Last sequence update)
01-0CT-2002 (TrEMBLrel. 22, Last annotation update)
Circumsporozoite protein (Fragment).
               115 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 115 AA
                                                                                                                                                                                                        Am. J. Trop. Med. Hyg. 51:659-668(1994).
EMBL, M33160, AAA29573.1;
InterPro: IPR003067; Crcmsprzoite.
InterPro: IPR00084; TS91.
Fēam; PF00090; tsp.1; 1.
FRINTS; PR01303; CRCMSPRZOITE.
SMART; SM00209; TSP1; 1.
PROSITE; PS50092; TSP1; 1.
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             PRT;
                                                                    Circumsporozoite protein (Fragment)
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Matches 18; Conservative
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C STRAIN-822a;

X MEDLINE-95077069; Pubmed-7985759;

A Jongwittwes S., Tanabe K., Hughes M.K., Kanbara H., Hughes A.L.;

Tallelic variation in the circumsporozoite protein of Plasmodium falciparum from Thai field isolates.";

The Min J. Trop. Med. Hyg. 51:659-668(1994).

R EMBL, M83164, AAA2567.1;

InterPro; IPR003047; Cromsprzoite.

InterPro; IPR003084; TSP1.

R Ffam; PF00099; tsp.1; 1.

PR Ffam; PF00099; tsp.1; 1.

SMRINTS; PR001203; CRCMSPRZOITE.

SMRINTS; PR001209; TSP1: 1.
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MEDLINE=95077069; PubMed=7985759;
MEDLINE=95077069; PubMed=7985759;
MEDLINE=95077069; PubMed=7985759;
Malbalia variation in the circumsporozoite protein of Plasmodium falciparum from Thai field isolates.";
Allelic variation in the circumsporozoite protein of Plasmodium falciparum from Thai field isolates.";
Am. J. Trop. Med. Hyg. 51:659-668(1994).
InterPro: IPR003067; Cromsprzoite.
InterPro: IPR00884; TSP1.
PRINTS: PR001303; CRCMSPRZOITE.
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NCBI_TaxID=5833;
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78.3%; Pred. No. 0.00045;
7ative 0; Mismatches 5; Indels
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SEQUENCE 115 AA; 12925 MW; A24CB33AEBE3F232 CRC64;
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                                                                        01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-WAR-2003 (TrEMBLrel. 23, Last annotation update)
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01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
                                            115 AA
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                                                                                                                                       Circumsporozoite protein (Fragment)
                                            PRT;
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PROSITE; PS50092; TSP1; 1.
NON_TER 1 1
SEQUENCE 115 AA; 12925 MW;
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Best Local Similarity 78.39
Matches 18; Conservative
                                          PRELIMINARY;
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RESULT 4
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Doclan D.L., Saul A., Good M.F.;

"Geographically restricted heterogeneity of the Plasmodium falciparum "Geographically restricted heterogeneity of the Plasmodium falciparum circumsporozoite protein: relevance for vaccine development.";

Submitted (FEB-1922) to the EMBL/GenBank/DDBJ databases.

EMBL, M77203: AAA29517.2;

EMBL, M77203: AAA29517.2;

FINTERPO: IPRO003067; Crcmsprzoite.

Pfam; PF00090; tsp_1; 1.

PRINTE; PR000309; TSP1; 1.

PROSITE; PS50092; TSP1; 1.
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Doolan D.L., Saul A., Good M.F.;

Doolan D.L., Saul A., Good M.F.;

"Geographically restricted heterogeneity of the Plasmodium falciparum circumsporozoite protein: relevance for vaccine development.";

Submitted (FEB-1992) to the EMBL/GenBank/DDBJ databases.

EMBL, M77204, AAAA9518.2;

InterPro; IPR000864; TSPI.
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NCBL_TaxID=5833;
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Plasmodium falciparum.
Eukaryota, Alveolata, Apicomplexa, Haemosporida, Plasmodium
                                                                                                                       48.5%; Score 82; DB 5; Length 115; 78.3%; Pred. No. 0.00045; Live 0; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE 115 AA; 12925 MW; 697DF63EEBEBDA90 CRC64;
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01-OCT-2000 (TrEMBLrel. 15, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
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78.3%; Pred. No. 0.00046;
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              Pfam; PF00090; tsp_1; 1.
PRINTS: PR0130; CRCMSPRZOITE.
SMART; SM00209; TSP1; 1.
PROSITE; PS50092; TSP1; 1.
                                                                                                                                         18; Conservative
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Les 18; Conserva
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"Allelic variation in the circumsporozoite protein of Plasmodium falciparum from Thai field isolates.";
Am. J. Trop. Med. Hyg. 51:659-668 (1994).
EMBL; M83159; AAA29572.1;
Interpro; IPR003067; Crcmsprzoite.
Interpro; IPR003067; Crcmsprzoite.
Pfam; PF00090; tsp_1; Tsp1.
Pfam; PF00090; tsp_1; Tsp1.
SMART; SM00209; TSP1.
PROSITE; PS50092; TSP1; 1.
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                                                                                                                                                                                                                                                                                             Plasmodium falciparum.
Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
NCBL_TaxID=5833;
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Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
NCBL_TaxID=5833;
                Length 115;
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48.5%; Score 82; DB 5; Length 115
Best Local Similarity 78.3%; Pred. No. 0.00045;
Matches 18; Conservative 0; Mismatches 5; Indels
                                            Indels
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01-WAY-2000 (TrEMBLrel. 13, Last sequence update)
01-WAR-2003 (TrEMBLrel. 23, Last annotation update)
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01-NOV-1996 (TIEMBLrel. 01, Last sequence update)
01-MAR-2003 (TIEMBLrel. 23, Last annotation update)
Circumsporozoite protein (Fragment).
48.5%; Score 82; DB 5; Lei
78.3%; Pred. No. 0.00045;
Mismatches 5;
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InterPro; IPR000884; TSP1.
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MEDLINE=95077069; PubMed=7985759;
                           Local Similarity 78.3
nes 18; Conservative
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InterPro; IPR000884; TSP1.
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Doolan D.L., Saul A., Good M.F.;

Doolan D.L., Saul A., Good M.F.;

"Geographically restricted heterogeneity of the Plasmodium falciparum circumsporozoite protein: relevance for vaccine development.";

Submitted (FEB-1922) to the EMBL/GenBank/DDBJ databases.

EMBL; M77205; AAA29519.2; -.

InterPro; IPR003067; Cremsprzoite.

InterPro; IPR003067; TSP1.

Pfan; PF000090; tSP1.1.

PRINTS; PR01303; CRCMSPRZOITE.
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Doolan D.L., Saul A., Good M.F.;

"Geographically restricted heterogeneity of the Plasmodium falciparum circumsporozoite protein: relevance for vaccine development.";

Submitted (FEB-1992) to the EMBL/GenBank/DDBJ databases.

EMBL; M77202; AAA29516.2; -.

InterPro; IPR003067; Crcmsprzoite.
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025794;
01-NOV-1996 (TrEMBLrel. 01, Created)
01-OCT-20000 (TrEMBLrel. 15, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Circumsporozotic protein (Fragment).
Plasmodium falciparum.
Plasmodium falciparum.
Plasmodium; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
NCBL_TAXID-5833;
                                                                                                                                                                                                                                                                                                  Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
NCBI_TaxID=5833;
                                                                                         Match 48.5%; Score 82; DB 5; Length 117; Local Similarity 78.3%; Pred. No. 0.00046; les 18; Conservative 0; Mismatches 5; Indels
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                                                                  D96BE209420BADE6 CRC64;
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                                                                                                                                                                                                                     117 AA
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Pfam; PF00090; tsp_1; 1.
PRINTS; PR01303; CRCMSPRZOITE.
SMART; SM00209; TSP1; 1.
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                                 PROSITE; PS50092; TSP1; 1.
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Matches 18; Conservative
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Q25797;
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Bagris M., Biswas S., Kariuki S., Lal A.A.;
Magris M., Biswas S., Kariuki S., Lal A.A.;
A study of genetic diversity in the gene encoding the
circumsporozoite protein (CSP) of Plasmodium falciparum from different
transmission areas-xVI. Asembo Bay Cohort Project.";
Mol. Biochem. Parasitol. 12:83-90(2002).
EMBL: AF540481; AAN87615.1;
SEQUENCE 356 AA; 38840 MW; BIAB87D66609A100 CRC64;
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"A study of genetic diversity in the gene encoding the circumsporozoite protein (CSP) of Plasmodium falciparum from different transmission areas-XVI. Asembo Bay Cohort Project.";
Mol. Biochem. Parasitol. 125:83-90(2002).
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Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
NCBI_TaxID=70152;
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Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
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78.3%; Pred. No. 0.0016;
...ematches 5; Indels
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                                                                                                                                                             8F9B92CC10ECC212 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      01-WAR-2003 (TrEMBLrel. 23, Created)
01-WAR-2003 (TrEMBLrel. 23, Last sequence update)
11-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Circumsporozoite protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Created)
Last sequence update)
Last annotation update)
                                                                                                                                                                                        48.5%; Score 82; DB 5; Le
78.3%; Pred. No. 0.00046;
Niematches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        356 AA
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                                                                                                                                                                                                                                                                                                                                                85 EKKICKMEKCSSVFNVVNSSIGL 107
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    2 EKKIAKMEKASSVFNVVNSGPSL 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 EKKIAKMEKASSVFNVVNSGPSL 24
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
MEDLINE=22356746; PubMed=12467976;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      STRAIN=Asembo Bay;
MEDLINE=22356746; PubMed=12467976;
                                                                                                                                                          117 AA; 13080 MW;
Pfam; PF00090; tsp_1; 1.
PRINTS: PR0103; CRCMSPRZOITE.
SMART; SM00209; TSP1; 1.
PROSITE; PS50092; TSP1; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAR-2003 (TrEMBLrel. 23, 01-MAR-2003 (TrEMBLrel. 23, 01-MAR-2003 (TrEMBLrel. 23,
                                                                                                                                                                                                                                         Best Local Similarity 78.3
Matches 18; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Circumsporozoite protein.
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                                                                                                                                                                                                Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
NCBI_TaxID=5833;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Plasmodium falciparum.
Eukaryota; Alveolata; Apicomplexa; Haemosporida; Plasmodium.
NCBI_TaxID=5833;
                          48.5%; Score 82; DB 5; Length 360; 78.3%; Pred. No. 0.0016; tive 0; Mismatches 5; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         48.5%; Score 82; DB 5; Length 363; 78.3%; Pred. No. 0.0016;
                                                                                                                                                                                                                                                                                                                                48.5%; Score 82; DB 5; Length 36C ilarity 78.3%; Pred. No. 0.0016; Conservative 0; Mismatches 5; Indels
EMBL; AF540462; AAN87596.1; -. SEQUENCE 360 AA; 39093 MW; 6504CC012649236C CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Last sequence update)
Last annotation update)
                                                                                                                                                   Last sequence update)
Last annotation update)
                                                                                                                                                                                                                                                                                                                                                                                                                                  363 AA.
                                                                                                                          360 AA
                                                                       328 EKKICKMEKCSSVFNVVNSSIGL 350
                                                                                                                                                                                                                                                                                                                                                                              Created)
                                                                                                                          PRT;
                                                                                                                                            Created)
                                                             2 EKKIAKMEKASSVFNVVNSGPSL 24
                                                                                                                                                                                                                                                                                                                                                                    2 EKKIAKMEKASSVFNVVNSGPSL 24
                                                                                                                                                                                                                                                                                                                                                                                                                                 PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRAIN=Bolivar;
MEDLINE=22356746; PubMed=12467976;
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                                                                                                                                          01-MAR-2003 (TrEMBLrel. 23, 01-MAR-2003 (TrEMBLrel. 23, 01-MAR-2003 (TrEMBLrel. 23,
                      Query Match
Best Local Similarity 78.39
Matches 18; Conservative
                                                                                                                                                                      Circumsporozoite protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Circumsporozoite protein.
                                                                                                                                                                                                                                                                                                                                                                                                                                 PRELIMINARY;
                                                                                                                          PRELIMINARY;
                                                                                                                                                                                        Plasmodium falciparum.
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Best Local Similarity
Matches 18; Conserv
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SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                     328
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                                                                                                                                    0819н6;
                                                                                                                         981946
                                                                                                                                                                                                                                                                                                                                                                                                                                 0819н3
                                                                                                        RESULT 14
Q819H6
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through a linker to a solid phase, forming a complex of (A)-solid phase.

through a linker to a solid phase, forming a complex of (A)-solid phase.

Where (A) comprises 10-50 amino acids capable of forming a secondary structure in a benign buffer after liberation from the solid phase, and further the (A)-solid phase complex comprises an immunogenic substance and/or an immune mediator coupled on (A). The present sequence cepresents a specifically claimed r-cell stimulatory peptide from the present invention. An (A)-solid phase complex can be used as a scaffold for the production of chemical derivatives, characterised by covalently attaching molecules at attachment points. Alternatively (A) is used as a scaffold-peptide for the incorporation into an Immunostimulating complex (Iscom) resulting an (A)-iscom complex which is used for the complex (Iscom) resulting an (A)-iscom complex which is used for the conjugation. (A) derivatised with one or more peptides having fibronectin. aminin- or vitronectin-like binding activities can be used for the promotion of cell-attachment to plastic surfaces, in of specifically-binding aptamers or as a diagnostic agent. Such of specifically-binding aptamers or as a diagnostic agent. Such or indicative of pregnancy or of a disease, such as an infectious, cutoimmune or cancerous disease.

(Updated on 25-MAR-2003 to correct PF field.)
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T-cell stimulatory peptide; immunogen; non-dendritic; carrier; tumour; scaffold; inhibition; metastasis; wound healing; solid phase.
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                                                                                                                                                                                                                                                                                                                                                                                            Non-dendritic peptide carrier linked to a solid phase - useful as a diagnostic agent and as a scaffold for production of chemical derivatives
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44.8%; Score 78; DB 18; Length 18;
Best Local Similarity 94.4%; Pred. No. 0.0002;
Matches 17; Conservative 0; Mismatches 1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 30; Page 199; 262pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1 KLLSLIKGVIVHRLEGVE 18
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                                                                                                                                                                                         97WO-DK00146.
                                                                                                                                                                                                                               96DK-0000398.
                                                                                                                                                                                                                                                                                                               Heegaard PMH, Jakobsen PH;
                                                                                                                                                                                                                                                                      (PEPR-) PEPRESEARCH AS.
                                                                                                                                                                                                                                                                                                                                                        WPI; 1997-512645/47.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Sequence ' 18 AA;
                                                            Measles virus.
                                                                                                                                                                                                                             03-APR-1996;
                                                                                                     WO9738011-A1
                                                                                                                                             16-0CT-1997.
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Location/Qualifiers
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N-PSDB; ABZ58288.
                                                                                                                                          WO200288081-A2.
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22-APR-1998
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                             Protein
                                                             Peptide
                                                                                              Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antibodies against gonadotropin releasing hormone (GRRH also known as luteinising hormone releasing hormone. LHRH) comprising a fusion peptide which comprises a promiseuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic limmunomimic peptide apitope or its analogue. The synthetic limmunomimic peptide and immune response against GRRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other synthetic cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GRRH antibody titres. The present sequence is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        The invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Frizzled; Fzd-2; receptor; human; head and neck squamous carcinoma; cancer; diagnosis; immunotherapy; gene therapy; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Frizzled putative B-cell epitope-measles virus MVF epitope fusion.
                                                                                                                                                                                                                                                                                                                                                                                                    Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue -
                                                                         /note= "Spacer peptide"
23..31
/note= "Gonadotrophin releasing hormone epitope"
                                          "Measles virus fusion protein F epitope"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 49.4%; Score 86; DB 23; Length 31; 100.0%; Pred. No. 2.6e-05; tive 0; Mismatches 0; Indels
                                                                                                                           31
/note= "Amidated glycine or glycinamide"
             Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                        Stevens VC:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ABP72236 standard; Protein; 75 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claim 11; Page 7; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    1 KLLSEIKGVIVHRLEGVE 18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  17 KLLSEIKGVIVHRLEGVE 34
                                                                                                                                                                                                                                        04-MAY-2001; 2001WO-US14363.
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Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chimeric - Homo sapiens.
Chimeric - Measles virus.
Chimeric - Synthetic.
                                                                                                                                                                                                                                                                                                                                      Grimes S, Michaeli D,
                                              /note=
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                                                                                                                                                                                                                                                                                                                                                                       WPI; 2002-049440/06.
                                                                                                                                                                                                                                                                                                       (APHT-) APHTON CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31 AA;
                                                                                                                                                                       WO200185763-A2
                                                                                                                         Addified-site
                                                                                                                                                                                                        15-NOV-2001
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             Key
Peptide
                                                          Peptide
                                                                                          Peptide
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ABP72236
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The present sequence is that of a fusion protein in which the measles virus MVF helper T cell epitope is joined via a linker peptide to a putative B cell epitope of human fizzled Fzd-2. In an example from the invention, DNA encoding the construct was inserted into a plasmid vector, and mice were injected with plasmid DNA and then boosted with peptide or recombinant protein. The B-cell epitope may need to be redesigned to eliminate cross-reactivity in the humoral response to other fizzled isoforms. The invention is based on the finding that most head and neck squamous carcinoma cell lines (HNSCC) overexpress one or more wingless (Wnt) or frizzled (Fzd) mRNAs, making the Wnt and Fzd receptors useful targets for immunotherapy of this common cancer. The invention of mines claimed methods for determining, by RT-PCR, overexpression of a Wnt or Fzd grotein in a cancer, and for altering the growth of a cell overexpressing a Wnt and/or Fzd protein in a cancer, and for altering the contacting the cell with an antibody against the protein, or with a synthetic peptide, recombinant protein or DNA vector comprising a non-homologous region of wnt and/or Fzd proteins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Determining overexpression of wnt or frizzled gene in a tumor cell useful for immunotherapy in head and neck squamous cell carcinoma comprises reverse transcription PCR with primers directed against the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Gaps
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/note= "Measles virus MVF T cell epitope"
                                                    20..23
/note="Linker peptide"
24..75
/note="Frizzled putative B cell epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Leoni LM, Corr M, Carson DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 1; Page 22; 51pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        AAW35441 standard; peptide; 18 AA.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-MAY-2001; 2001US-287995P.
                                                                                                                                                                                                                                                                                                                                                                                                                                 01-MAY-2002; 2002WO-US13802
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(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (REGC ) UNIV CALIFORNIA.
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"Malaria CSP protein (378-398 aa)"
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                                                                                                                                                                             04-MAY-2001; 2001WO-US14363
                                                                    2-10 aa)"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chimeric - Measles virus.
Chimeric - Mammalia.
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 100.
nes 15; Conservative
                                                                                                                                                                                                                                                                                                                                                            epitope or its analogue
  /note=
                                                       /note=
                                                                                                                                                                                                                                                             Michaeli D,
                             /note=
                                                                                                                                                                                                                                    (APHT-) APHTON CORP.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            51 AA;
                                                                                                                          WO200185763-A2
                                                                                 Modified-site
                                                                                                                                                   15-NOV-2001.
                                                                                                                                                                                                                                                               Grimes S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
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               Peptide
                                         Peptide
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                                                                                                                                                                                                                                                                     antibodies against gonedoriopin releasing hormone (GnRH aiso known as luteinising hormone releasing hormone. LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunoominic peptide epitope or its analogue. The synthetic immunoomin is useful inducing an immuno response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic phypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                             The invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Other" Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                               Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     'note- "Gonadotrophin releasing hormone epitope
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 87; DB 23; 1
Pred. No. 3.3e-05;
0; Mismatches 0;
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                                                                                                            Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU11431 standard; peptide; 51 AA.
                                                                                                                                                                                                                                  Claim 11; Page 11; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    50.0%,
100.0%; Pre-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chimeric - Plasmodium falciparum.
Chimeric - Mammalia.
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                         04-MAY-2001; 2001WO-US14363.
                                                    05-MAY-2000; 2000US-202328P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 HWSYGLRPGSSGPSL 16
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Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                       epitope or its analogue
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/note=
17..36
                                                                                                            Michaeli D,
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                                                                                                                                    WPI; 2002-049440/06
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                                                                               (APHT-) APHTON CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                         50 AA;
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15-NOV-2001
                                                                                                            Grimes S,
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The invention relates to a synthetic immunogen for inducing specific antibodies against gonadorropin releasing hormone (GnRH also known as luteinising hormone releasing hormone (LRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope immunominic peptide epitope or its analogue. The synthetic immunomen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other synthetic phyparecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence
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luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
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                                                                     "Gonadotrophin releasing hormone epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     .;
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                                                                                                                                                                                      /note= "Amidated glycine or glycinamide
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Pred. No.
"Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Claim 11; Page 12-13; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Stevens VC;
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100.0%; Pre
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Peptide
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AAU11429
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                                               The invention relates to a synthetic immunogen for inducing specific antibodies against gonadotropin releasing hormone (GnRH also known sat luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic phypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                      Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; IHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunominic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                               Gaps
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 promiscuous helper T-cell peptide epitope and immunomimic peptide
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                                                                                                                                                                                                           Length 36;
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                                                                                                                                                                                                        50.0%; Score 87; DB 23; I
100.0%; Pred. No. 2.2e-05;
iive 0; Mismatches 0;
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                                                                                                                                                                                                                                                                                                                        AAU11425 standard; peptide; 37 AA.
                              Page 10; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                      Synthetic immunogen peptide 6.
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Chimeric - Mammalia.
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                                                                                                                                                                                                                                                  2 HWSYGLRPGSSGPSL 16
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                                                                                                                                                                                                                              Conservative
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17..37
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                                                                                                                                                                                                                   Local Similarity
nes 15; Conserv
                                                                                                                                                                                      36 AA;
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                               Claim 11;
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                                                                                                                                                                                       Seguence
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Matches
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The invention relates to a synthetic immunogen for inducing specific antibodies against gonadotropin releasing hormone (GnRH also known so luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper r-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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                          gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide
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synthetic immunogen for inducing immune response against
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Pred. No. 2.3e-05;
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17..37
/note= "Tetanus toxoid (
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100.08; Pr.
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                                                                                                                                                     Claim 11; Page 9; 43pp; English
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Chimeric - Mammalia.
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(1..10 aa)"
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                                                                                           epitope or its analoque
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15-NOV-2001
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hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic immunogen of the invention.
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luteinising hormone releasing hormone, IHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunominic peptide epitope;
braast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
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                                                                                                                                                                                                                                                      Score 89; DB 23; Le
Pred. No. 9.5e-06;
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83.3%;
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46
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Best Local Similarity 83.3
Matches 15; Conservative
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32..37
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The invention relates to a synthetic immunogen for inducing specific antibodies against gonadotropin releasing hormone (GnRH also known set luteinising hormone releasing hormone. LiRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other synaecological cancer), endometriosis, uterine fibroids, benign prostatic phypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GRRH antibody titres. The present sequence is a synthetic immunogen of the invention.
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luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper r-call peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
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Pred. No. 1.5e-05;
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Claim 11; Page 12; 43pp; English.
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83.3%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Local Similaricy res 15; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /note=
17..36
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/note=
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI; 2002-049440/06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (APHT-) APHTON CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                            46 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WO200185763-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            non-typable Haemophilus influenzae. This sequence represents an example of a chimeric fimbrin/T-cell epitope peptide and is designated LB2. The peptide comprises a 18 amino acid sequence corresponding to amino acids 163-180 of the fimbrin protein, the linker sequence and amino acids 188-302 of the measles virus fusion protein (a T-cell epitope).
                             peptide linker to the measles virus MVFT helper epitope. In an example from the invention, DNA encoding the construct was inserted into a plasmid vector, and mice were injected with plasmid DNA and then boosted with peptide or recombinant protein. The B-cell then boosted with peptide or recombinant protein. The B-cell ceptope may need to be redesigned to eliminate cross-reactivity in the humoral response to other firizaled isoforms. The invention is based on the finding that most head and neck squamous carcinoma cell lines (HNSCC) overexpress one or more wingless (Mnt) or firizaled (Fzd) mRNAs, making the Wnt and Fzd receptors useful targets for immunotherapy of this common cancer. The invention of a Wnt or Fzd gene in a tumour cell, for detecting overexpression of a Wnt or Fzd gene in a tumour cell, for detecting overexpression of a Wnt or Fzd gene in a tumour cell, for detecting overexpression of a Wnt and/or Fzd protein in a cancer, and for altering the contacting the cell verexpressing a Wnt and/or Fzd protein by contacting the cell with an antibody against the protein, or with a synthetic peptide, recombinant protein or DNA vector comprising a non-homologous region of Wnt and/or Fzd proteins.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Chimeric; non-typable Haemophilus influenzae; fimbrin; T-cell epitope;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic chimeric fimbrin peptide - useful for vaccination against non-typable Haemophilus influenzae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   75
putative B cell epitope of human frizzled Fzd-2 is joined via a putative. B cell epitope. In an
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ------GPSLKLLSEIKGVIVHRLEGVE
                                                                                                                                                                                                                                                                                                                                                                                                                                            Score 102; DB 24; Length 75;
Pred. No. 3.5e-07;
2; Mismatches 2; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic chimer fimbrin/T-cell epitope peptide LB2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              immunogenic composition; immune response
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Disclosure; Column 4; 16pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAW67582 standard; peptide; 40
                                                                                                                                                                                                                                                                                                                                                                                                                                          58.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         95US-0460502.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6 GLRPGSS------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
Best Local Similarity
Matches 25; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                      75 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Bakaletz LO,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         02-JUN-1995;
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                                                                                                                                                                                                                                                                                                                             Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper r-cell peptide epitope; immunominic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note= "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "Gonadotrophin releasing hormone epitope"
                                                                      ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       17..31
/note= "Tetanus toxoid sequence (830-844 aa)"
                                          Length 40;
                                                                        Indels
                                        Score 101; DB 20;
Pred. No. 2.3e-07;
; Mismatches 1;
                                                     Pred. No. 2.3e
2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "Spacer peptide"
                                                                                                                    11 SSGPSLKLLSEIKGVIVHRLEGVE 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Stevens VC;
                                                                                                                                                                                                          AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Claim 11; Page 10; 43pp; English.
                                                                                                                                                                                                         AAU11426 standard; peptide; 31
                                                                                                                                                                                                                                                                                                  Synthetic immunogen peptide 7.
                                                                                                                                                                                                                                                                                                                                                                                                                       Chimeric - Clostridium tetani.
Chimeric - Mammalia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /label= OTHER
                                          58.0%;
87.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               04-MAY-2001; 2001WO-US14363.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             05-MAY-2000; 2000US-202328P
                                                                                                                                                                                                                                                                     12-MAR-2002 (first entry)
                                                        Best_Local Similarity 87.5
Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            /note=
17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                epitope or its analogue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Grimes S, Michaeli D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (APHT-) APHTON CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WPI; 2002-049440/06
            40 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Misc-difference
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                                                                                                                                                                                                                                                                                                                                                                                                                                       Chimeric -
Synthetic.
                                                                                                                                                                                                                                        AAU11426;
              Sequence
                                            Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Peptide
                                                                                                                                                                            RESULT 7
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peptides (UBI(f) peptides) of P5-like fimbrin proteins from various peptides (UBI(f) peptides) of P5-like fimbrin proteins from various haemophilus influenzae strains. The peptides are used for diagnosis, prevention, and treatment of Haemophilus influenzae infections, such infection. The peptides may also be used in vaccines against infection. The peptides and probes from the present invention can be used for diagnosis of H. influenzae infection. AAY19955 to AAY1993, and AA291201 to AA291252, represent sequences used in the exemplification of
                       The present invention describes antigenic P5-like fimbrin subunit
Example 4; Page 38; 68pp; English.
                                                                                                                                 the present invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               07-NOV-2002.
                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                        ABP72235;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rhee C,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Protein
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                                                                                                                                                                                                                                                                                           RESULT 5
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                                                                                                                                                                                                    comprising a non-typable Haemophilus influenzae fimbrin peptide fused via a linker peptide to a T-cell epitope peptide. The chimeric peptide is used in immunogenic compositions which induce an immune response against non-typable Haemophilus influenzae. This sequence represents an example of a chimeric fimbrin/T-cell epitope peptide and is designated LB1. The peptide comprises a 19 amino acid sequence corresponding to amino acids 117-135 of the fimbrin protein, the linker sequence and amino acid 288-302 of the measles virus fusion protein (a T-cell epitope).
                                                                                                                                                                                         The invention relates to the manufacture of a synthetic chimeric peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Vaccine; non-typeable Haemophilus influenzae; ntHi; infection; chimeric protein; Hemophilus influenzae; PS-like fimbrin protein; lipoprotein D; LB1(f); immunogenic; antigenic; otitis media; sinusitis; conjunctivitis; lower respiratory tract infection.
                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                               Synthetic chimeric fimbrin peptide - useful for vaccination against non-typable Haemophilus influenzae
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Novel antigenic P5-like fimbrin subunit peptides used in vaccines against Haemophilus influenza
                                                                                                                                                                                                                                                                                                                                                              ;
0
                                                                                                                                                                                                                                                                                                                                        Length 40;
                                                                                                                                                                                                                                                                                                                                                              Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Measles virus fusion protein T-cell promiscuous epitope.
                                                                                                                                                                                                                                                                                                                                                             ..
                                                                                                                                                                                                                                                                                                                                     60.9%; Score 106; DB 20; 79.3%; Pred. No. 4.2e-08;
                                                                                                                                                                                                                                                                                                                                                              0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lobet
                                                                                                                                                                                                                                                                                                                                                                                                   6 GLRPGSSGPSLKLLSEIKGVIVHRLEGVE 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (SMIK ) SMITHKLINE BEECHAM BIOLOGICALS. (OHIS ) UNIV OHIO STATE RES FOUND.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Deguesne G,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AA.
                                                                                                                                                                  Claim 4; Column 4; 16pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AAY79986 standard; Peptide; 40
           95US-0460502
                                   95US-0460502
                                                                                                                                                                                                                                                                                                                         99WO-US11980
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                                                                                 Bakaletz LO, Kaumaya PTP;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (first entry)
                                                         OHIO STATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Cohen J,
                                                                                                         WPI; 1999-044514/04
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                                                                                                                                                                                                                                                                                                                40 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Measles virus
                                                         VINU ( SIHO)
           02-JUN-1995;
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                                 02-JUN-1995;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WO9964067-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic.
                                                                                                                                                                                                                                                                                                                Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 4
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                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Frizzled; Fzd-2; receptor; human; head and neck squamous carcinoma; cancer; diagnosis; immunotherapy; gene therapy; cytostatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Determining overexpression of wnt or frizzled gene in a tumor cell useful for immunotherapy in head and neck squamous cell carcinoma
                                                                                         ö
                                                                                                                                                                                                                                                                                                                                                                                                                                            Frizzled putative B-cell epitope-measles MVF epitope fusion.
                                        Length 40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present sequence is that of a fusion protein in which
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Frizzled putative B cell epitope"
                                                                                           Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Carson DA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Measles MVF T cell epitope"
                                        Score 106; DB 21;
Pred. No. 4.2e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Corr M,
                                                                                         0; Mismatches
                                                                                                                                    6 GLRPGSSGPSLKLLSEIKGVIVHRLEGVE 34
                                                                                                                                                               12 GTRDHKKGPSLKLLSLIKGVIVHRLEGVE 40
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 "Linker peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Example 1; Page 22; 51pp; English
                                                                                                                                                                                                                                                                                                   ABP72235 standard; Protein; 75
                                        60.9%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        01-MAY-2001; 2001US-287995P.
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                                                                                                                                                                                                                                                                                                                                                                                               28-APR-2003 (first entry)
                                           Query Match 60.9
Best Local Similarity 79.3
Matches 23; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chimeric - Homo sapiens.
Chimeric - Measles virus.
Chimeric - Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 REGC ) UNIV CALIFORNIA
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/note=
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      frizzled gene
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      antitumour; epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2003-111859/10.
40 AA;
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WO200185763-A2.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAW67581;
                   Peptide
 Peptide
                                         Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 3
  pp
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      δ
                                                                                                                                                                                                                       antibodies against gonadotropin releasing hormone (GREH also known as luteinising normone releasing hormone (GREH also known peptide which comprises a promiscuous helper T-cell peptide epitope and immunominist peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GREH in an animal subject, and as such is useful as contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GREH antibody titres. The present sequence is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gonadotrophin releasing hormone; GRRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper r-cell peptide epitope; immunominic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                The invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                 gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note= "Gonadotrophin releasing hormone epitope (1..10 aa)"
                                                                                                                                                                                                                                                                                                                                                                                                  ö
                                                                                                                                       Novel synthetic immunogen for inducing immune response against
                                                                                                                                                                                                                                                                                                                                                                              Length 34;
                                                                                                                                                                                                                                                                                                                                                                                                  Indels
                                                                                                                                                                                                                                                                                                                                                                          99.4%; Score 173; DB 23;
100.0%; Pred. No. 5.6e-18;
ive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                 2 HWSYGLRPGSSGPSLKLLSEIKGVIVHRLEGVE 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                /note= "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                             Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAU11428 standard; peptide; 47 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Chimeric - Plasmodium falciparum.
Chimeric - Mammalia.
Synthetic.
                                                                                                                                                                                         Claim 11; Page 9; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Synthetic immunogen peptide 9.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 label- OTHER
                              04-MAY-2001; 2001WO-US14363.
                                                  05-MAY-2000; 2000US-202328P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         (first entry)
                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity 100.
                                                                                                                                                                      epitope or its analogue
                                                                                             Michaeli D,
                                                                        (APHT-) APHTON CORP
                                                                                                                WPI; 2002-049440/06
                                                                                                                                                                                                                                                                                                                                                       34 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Misc-difference
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                                                                                             Grimes S,
                                                                                                                                                                                                                                                                                                                                                        Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAU11428;
                                                                                                                                                                                                                                                                                                                                                                            Query Match
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antibodies against gondorropin releasing hormone (GRRH also known as lutein. Single hormone releasing hormone. LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic high and specific anti-GRRH antibody titres. The immunogen is effective in eliciting is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Chimeric; non-typable Haemophilus influenzae; fimbrin; T-cell epitope;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          The invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue
                                                                          ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Length 47;
"Malaria CSP protein (288-302 aa)"
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                                                                                                                                                                                              /note= "Amidated glycine or glycinamide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic chimer fimbrin/T-cell epitope peptide LB1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. 8.3e-18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2 HWSYGLRPGSSGPSLKLLSEIKGVIVHRLEGVE 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mismatches
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                                                     "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAW67581 standard; peptide; 40 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Claim 11; Page 11; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    99.4.,
100.0%; Pre
0;
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                                                                                                                                                                                                                                                                                                                                                                                                                             05-MAY-2000; 2000US-202328P.
                                                                                                                   (2-10 aa)"
47
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Query Match
Best Local Similarity 100.0
Matches 33; Conservative
                    35..38 /note= "
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Grimes S, Michaeli D,
  /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                WPI; 2002-049440/06.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (APHT-) APHTON CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           47 AA;
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Synthetic immunoge Synthetic immunoge

Synthetic immunoge

Mesles virus fusio LHRH-containing im

T-cell stimulatory

Frizzled putative

Measles virus mimo

Measles virus F pr

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Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
brasst cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /label= OTHER
/note= "Other= Pyro-glutamic acid or 5-oxo prollne"
                                                                                                                                                                                                                                                                                                                                                                                                            ALIGNMENTS
                                                                                                                                                                                                                                   AAY68540
AAY54537
AAY58764
                                                                                                                                                                                                                                                                   AAB68638
AAB68169
ABG68169
ABG68183
AAU97873
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AAY91156
AAY68567
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AAW05604
AAR88401
AAR88392
AAY80054
AAY91121
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AAR83584
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Synthetic immunogen peptide 5.
 AAU11424 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Chimeric - Measles virus.
Chimeric - Mammalia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= '
1..10
/note= '
11..16
/note= '
/note= '
  Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       12-MAR-2002
                                                                                                        Synthetic.
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                                                                                                                                                                                                                                                                                                                                                                                                                                          RESULT 1
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  Synthetic immunoge
                                                                                  (without alignments)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                        September 24, 2003, 16:58:36; Search time 38.4266 Seconds
                                                                                                                                                                                                                                                                                                                                       13. (SIDSI) gogdata/geneseq/genesegp-embl/AA1982.DAT:*
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28. SIDSI/gogdata/geneseq/genesegp-embl/AA2002.DAT:*
28. SIDSI/gogdata/geneseq/genesegp-embl/AA2002.DAT:*
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/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1981.DAT:
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           GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                 US-09-848-834A-13
174
1 XHWSYGLRPGSSGPSLKLLSEIKGVIVHRLEGVE
                                                                                                                                                                                                               hits satisfying chosen parameters:
                                                                                                                                                                                           1107863 seqs, 158726573 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUMMARIES
                                                                                                                                                                                                                                                                  Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
                                                    - protein search, using sw model
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AAU1428
AAW67581
AAY79986
ABP72235
AAW67582
AAW67582
AAW67582
AAU11420
AAU11430
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Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                       A_Geneseq_19Jun03:*
1: /SIDG1/mmdrt
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Maximum DB seq length: 200000000
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Post-processing:

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Total number

Searched:

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Sequence:

OM protein

Run on:

Scoring table:

Measles virus Tee Measles virus Tee LHRH-containing im IGE CH4 region con NWF Th epitope/LHR Peptide immunogen MVFITh-GG-mIGES.

"Gonadotrophin releasing hormone epitope"

Peptide Peptide eptide

Synthetic immunoge Synthetic chimer f Measles virus fusi Frizzled putative Synthetic chimer f Synthetic immunoge Synthetic immunoge Synthetic immunoge

Score

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Result

106 106 106 102 101 89 89

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"Measles virus fusion protein F epitope"

WO200185763-A2

"Spacer peptide"

migE2-GG-WVEITh.
migE2-GG-WVEITh.
LHRH-containing im
Helper T call epit
Measles virus F pr
Meiber Cell (Th)
Measles virus F pr

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Search completed: September 24, 2003, 17:00:23 Job time : 10.1776 secs
       COMPUTER READABLE FORM:
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US-08-488-351A-19
Sequence 19, Application US/08488351A
Sequence 19, Application US/08488351A
GENERAL INFORMATION:
APPLICANT: Ladd, Anna
APPLICANT: Mang, Chang Yi
APPLICANT: Mang, Chang Yi
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
CORRESPONDENCE ADDRESS:
ADDRESSEE: Maria C.H. Lin
STREET: New York
CITY: New York
                                                                                                                                  Sequence 19, Application US/08446692
| Patent No. 575951
| GENERAL INFORMATION:
| APPLICANT: Ladd, Anna. |
| APPLICANT: Mang, Chang Xi |
| APPLICANT: Land, Since Information of the period constructs |
| TITLE OF INVENTION: Immunogenic LHRH peptide constructs |
| TITLE OF INVENTION: Immunogenic LHRH peptide constructs |
| TITLE OF INVENTION: And synthetic universal immune stimulators for vaccines |
| TITLE OF INVENTION: Anna |
| CORRESPONDENCE ADDRESS: Abone |
| STREET: NY |
| COUNTY: NY |
| COUNTY: NY |
| COUNTY: LUIS |
| COMPUTER READABLE FORM: |
| MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SOFTWARE: Patentin Release #1.0, Version #1.25 CURRENT APPLICATION DATA: PAPLICATION NUMBER: US/08/446,692 FILING DATE: 7-JUN-1995 CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ATTORNEY AGENT INFORMATION:
NAME: Maria C.H. Lin
RECISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-4146 US2
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)415-8745
TELEPHONE: (516)751-6849
INFORMATION FOR SEQ ID NO: 19:
SEQUENCE CHARACTERISTICS:
LENGTH: 27 main a cids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
1 LSEIKGVIVHRLEGV 15
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MOLECULE TYPE: peptide
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Best Local Similarity
Matches 15; Conserva
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MEDIUM TYPE: FLOPPY disk
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: Date PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/488,351A
FILING DATE: 7-JUN-1995
CLASSIFICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: US 08/446,692
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/229,275
FILING DATE: 14-APR-1994
CLASSIFICATION DATA:
APPLICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION DATA:
APPLICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION: 424
FILING DATE: 27-APR-1992
CLASSIFICATION: 424
FILING DATE: 27-APR-1992
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Pred. No. 0.00054;
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100.0%; Pre
0; )
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NAME: Maria C.H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/OOCKET NUMBER: 11:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)415-8745
TELEFAX: (516)751-6849
INFORMATION FOR SEQ ID NO: 19:
SEQUENCE CHARACTERISTICS:
LENGTH: 27 amino acids
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Best Local Similarity 100.
Matches 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              TYPE: amino acid
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Sequence 12, Application PC/TUS9513841
GENERAL INFORMATION:
APPLICANT: United Biomedical Inc; Walfield, Alan M.;
APPLICANT: Wang, Chang Xi
TITLE OF INVENTION: Synthetic IgE Membrane Anchor
TITLE OF INVENTION: Peptide Immunogens for the Treatment of Allergy
NUMBER OF SEQUENCES: 32
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                                                                                                                                                                                                                                                                                    Score 72; DB 4; Length 15;
Pred. No. 0.00027;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         41.4%; Score 72; DB 5; Length 15; 100.0%; Pred. No. 0.00027; Live 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                             0; Indels
                                                                                                                                                                                                                                                                       41.4%; Scor.
100.0%; Pred. No. v...
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Wordberfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/13841
FILING DATE: 25-OCT-1995
CLASSIFICATION NUMBER: 08/328,519
FILING DATE: 25-OCT-1994
CLASSIFICATION:
ATTORNEY APPLICATION:
NAME: Maria H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/POCKET NUMBER: 1151-4157
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
TELEPHONE: 212-751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1151-4117
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REGISTRATION NUMBER: 29,323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CORRESPONDENCE ADDRESS:
ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
                                                                                                   TELEFAX: 212-751-6849
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 15 amino acids
                                                                                                                                                                                                                                                                                                                                                                                          1 LSEIKGVIVHRLEGV 15
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Best Local Similarity 100.(
Matches 15; Conservative
                                                                                                                                                                                                                                                                                Query Match
Best Local Similarity 100.0
Matches 15; Conservative
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TELEX: 421792
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                     ; TOPOLOGY: linear
; MOLECULE TYPE: peptide
US-09-770-014-1
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COMPUTER READABLE FORM:
                                                                                                                                                                                    amino acid
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0.00027;
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Patent No. 6559282
GENERAL INFORMATION:
APPLICANT: Wang, Chang Xi
TITLE OF INVENTION: NOVEL LHRH PEPTIDE
TITLE OF INVENTION: IMMUNOGENS
NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ADDRESSEE: Morgan & Finnegan, L.L.P. STREET: 345 Park Avenue
                                       E: Morgan & Finnegan, L.L.P.
345 Park Avenue
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ZUP: 10154-0054
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC Windows
SOFTWARE: WORG 97
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/770,014
                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Maria H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151-4157
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
TELEPRAX: 212-751-6849
                                                                                                                                                                                                                                        SOFTWARE: Mord 97
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/303,323
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION DATA:
APPLICATION NUMBER: 09/100,414
FILLING DATE: 20-JUNE-1998
ATTORNEY/AGENT INFORMATION:
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APPLICATION NUMBER: 09/100,414
FILING DATE: 20-JUNE-1998
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                   COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC Windows
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SEQUENCE CHARACTERISTICS:
LENGTH: 15 amino acids
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                                                                                                                                                                                  Floppy disk
  NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
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Best Local Similarity 100.(
Matches 15; Conservative
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MOLECULE TYPE: peptide
US-09-303-323-1
                                                                                                                                                             COMPUTER READABLE FORM:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             amino acid
                                                                                                                      COUNTRY: USA
ZIP: 10154-0054
                                                                              New York
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                                                                                                                                                                                    MEDIUM TYPE:
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                                           ADDRESSEE:
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Gaps
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Sequence 38, Application US/09100409A

Sequence 38, Application US/09100409A

Parent No. 6090388

APPLICANT: Wang, Chang Yi

TITLE OF INVENTION: PREVENTION AND TREATMENT OF HIV INFECTION AND TITLE OF INVENTION: IMMUNE DISORDERS

NUMBER OF SEQUENCES: 64

CORRESPONDENCE ADDRESS:
                                                                                                                                        0;
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                                                                                                 Score 72; DB 3; Length 15;
Pred. No. 0.00027;
0; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: Patentin Release #1.0, Version SOFTWARE: #1.25 SOFTWARE: APPLICATION DATA: APPLICATION NUMBER: US/09/100,409A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence 1, Application US/09303333
Patent No. 6228987
GENERAL INFORMATION:
APPLICANT: Wang, Chang Xi
TITLE OF INVENTION: NOVEL LHRH PEPTIDE
TITLE OF INVENTION: IMMUNOGENS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        REGISTRATION NUMBER:
REFERENCE/DOCKET NUMBER: 1151-4154
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                  41.4%; Scor.
100.0%; Pre
0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ADDRESSEE: MORGAN & FINNEGAN
STREET: 345 Park Avenue
CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEFAX: 212-751-6849
INFORMATION FOR SEQ ID NO: 38:
                                                                                                                                                                                                    1 LSEIKGVIVHRLEGV 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        COUNTRY: USA
ZIP: 10154-0054
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                             19 LSEIKGVIVHRLEGV 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CLASSIFICATION: 514
ATTORNEY/AGENT INFORMATION:
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                                                                                                   Query Match 41.45
Best Local Similarity 100.0
Matches 15; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE CHARACTERISTICS
                                 ; MOLECULE TYPE: peptide US-09-100-414B-1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TOPOLOGY: linear
MOLECULE TYPE: peptide
    amino acid
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                      linear
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Matches 15; Conserv
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                      TOPOLOGY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           STATE: NY
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Pred. No. 0.00066;
1; Mismatches 0
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APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: NOVEL LHRH PEPTIDE
TITLE OF INVENTION: IMMUNGENS
NUMBER OF SEQUENCES: 106
CORRESPONDENCE ADDRESS:
ADDRESSEE: Morgan & Finnegan, L.L.P.
STREET: 345 Park Avenue
                                                                                                                                                                                                                                                                                                                                      1151-4146 US2
                                                                  FILING DATE: 7 - UNA-1995
CLASSIFICATION: 424
PRIOR APPLICATION 1424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08 08/229,275
FILING DATE: 14 - APR-1994
CLASSIFICATION 14 24
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08 08/057,166
FILING DATE: 27 - APR-1992
CLASSIFICATION: 424
ATTORNEY/AGGENT INFORMATION:
NAME: MARIA C.H. Lin
REGISTRATION NUMBER: 29,323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SOFTWARE: Word 97
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/100,414B
FILING DATE: 20-JUNE-1998
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               REFERENCE/DOCKET NUMBER: 1151-4157
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
TELEPAX: 212-751-6849
                                                     APPLICATION NUMBER: US 08/446,692
FILING DATE: 7-JUN-1995
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COUNTRY: USA
ZIP: 10154-0054
COMPUTER REALABLE FORM:
MEDIUM TYPE: Floppy disk
~MEDIUM TYPE: Floppy disk
~WEUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sequence 1, Application US/09100414B Patent No. 6025468
                                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 1151
TELECOMUNICATION INFORMATION:
TELEPHONE: (212)415-8745
TELEPAX: (516)751-6849
INFORMATION FOR SEQ ID NO: 20:
SEQUENCE CHARACTERISTICS:
LENGTH: 42 amino acids
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NAME: Maria H. Lin
REGISTRATION NUMBER: 29,323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            42.0%;
93.8%;
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SEQUENCE CHARACTERISTICS:
LENGTH: 15 amino acids
7-JUN-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match 42.0
Best Local Similarity 93.8
Matches 15; Conservative
              CLASSIFICATION: 424
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ; MOLECULE TYPE: peptide US-08-488-351A-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             amino acid
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US-09-100-414B-1
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COUNTRY:
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                                                                                                                                                                                                                                          STATE:
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PCT-10595-13841-26
Sequence 26, Application PC/TUS9513841
Sequence 26, Application PC/TUS9513841
Sequence 26, Application PC/TUS9513841
SERRAL INFORMATION:
APPLICANT: United Biomedical Inc; Walfield, Alan M.;
APPLICANT: Wang, Chang Yilliam Yilliam Applicant: Wang, Chang Yilliam Synthetic IgE Membrane Anchor
TITLE OF INVENTION: Peptide Immunogens for the Treatment of Allergy
NUMBER OF SEQUENCES:
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                 Gaps
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                                                                                                                                   Query Match 42.2%; Score 73.5; DB 5; Length 34; Best Local Similarity 64.3%; Pred. No. 0.00043; Matches 18; Conservative 1; Mismatches 4; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     42.2%; Score 73.5; DB 5; 64.3%; Pred. No. 0.00057;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Mismatches
                                                                                                                                                                                                                     6 GLRPGSSGPSLKLLSEIKGVIVHRLEGV 33
                                                                                                                                                                                                                                          12 GEAPWTGG----LSEIKGVIVHRLEGV 34
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: WordPerfect 5.1
CURRENT APPLICATION DATA:
FILLING DATE: 25-OCT-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1151-4117
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CLASSIFICATION:
CLASSIFICATION:
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/328,519
FILING DATE: 25-0CT-1994
ATONEY/AGENT INFORMATION:
ATONEY/AGENT INFORMATION:
REGISTRATION NUMBER: 29,323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ; Sequence 20, Application US/08446692
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 1:
TELECOMMUNICATION INFORMATION
TELEPHONE: 212-758-4800
TELEFAX: 212-751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELEX: 421792
INFORMATION FOR SEQ ID NO: 26:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
          LENGTH: 34 amino acids
TYPE: amino acid
TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best_Local Similarity 64.3
Matches 18; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LENGTH: 43 amino acids
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear
MOLECULE TYPE: peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              COMPUTER READABLE FORM:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   New York
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US-08-446-692-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         COUNTRY:
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GENERAL INFORMATION:
APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines NUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
NUMBER OF SEQUENCES: 114
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: Patentin Release #1.0, version #1.25 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/446,692
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
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COMPUTER: IBM PC Compatible
COPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
CURREWT APPLICATION DATA:
APPLICATION NUMBER: US/08/488,351A
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   REFERENCE/DOCKET NUMBER: 1151-4146 US2
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)415-8845
TELEFAX: (516)751-6849
INFORMATION FOR SEQ ID NO: 20:
                                                                                                                                                                                                                                                                                                                                                            COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         US-08-488-351A-20; Sequence 20, Application US/08488351A; Patent No. 5843446
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ATTORNEY/AGENT INFORMATION:
NAME: Maria C.H. Lin
REGISTRATION NUMBER: 29,323
                                                                                                                                                                                                          ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CORRESPONDENCE ADDRESS:
ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18 LLSEIKGVIVHRLEGV 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE CHARACTERISTICS: LENGTH: 42 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ; MOLECULE TYPE: peptide US-08-446-692-20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 10154-0053
COMPUTER READABLE FORM:
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us-09-848-834a-13.rai

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UMBER: PCT/US95/13841
25-OCT-1995
                                                            1151-4117
                                       11 SSGPSLKLLSEIKGVIVHRLEGVE 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                11 SSGPSLKLLSEIKGVIVHRLEGV 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPOTER: IBM PC Compatible
COMPOTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
CONTWARE: WordPerfect 5.1
CURRENT APPLICATION DATA:
APPLICATION NUMBER: PCT/US95/136
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION UNMBER: 08/328,519
FILING DATE: 25-0CT-1994
CLASSIFICATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Lin, Maria C.H.
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151
TELECOMMUNICATION INFORMATION:
TELEPHONE: 212-758-4800
TELEFAX: 212-751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                        ; ORGANISM: SYNTHETIC CONSTRUCT US-09-148-711A-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CORRESPONDENCE ADDRESS: ADDRESSEE: Maria C.H
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILING DATE: 2 CLASSIFICATION:
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10154
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                                                                                                                                               US-09-148-711A-11
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COUNTRY:
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LENGTH: 40
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RESULT 2
US-09-148-711A-10
Sequence 10, Application US/09148711A
Fatent No. 6436405
GENERAL INFORMATION:
APPLICANT: The Ohio State University
TITLE OF INVENTION: Synthetic Chimeric Fimbrin Peptides
FILE REFERENCE: 18525-04010
CURRENT APPLICATION NUMBER: US/09/148,711A
CURRENT FILING DATE: 1998-09-04
FRIOR PRILING DATE: 1996-06-02
FRIOR RELING DATE: 1995-06-02
NUMBER OF SEQ. ID NOS: 12
SOFTWARE: Patentin version 3.0
                                                                                                                                                                                                                                                                                                                                                                                             60.9%; Score 106; DB 4; Length 40; 79.3%; Pred. No. 7.9e-09; tive 0; Mismatches 6; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 11, Application US/08460502
Patent No. 5443464
GENERAL INFORMATION:
GENERAL INFORMATION:
APPLICANT: Bakaletz, Lauren O.
APPLICANT: Raumaya, Parvin T.
TITLE OF INVENTION: Synthetic Chimeric Fimbrin Peptides
NUMBER OF SEQUENCES: 11
CORRESPONDENCE ADDRESS:
ADDRESSEE: Calfee, Halter and Griswold
STREET: 800 Superior Avenue
CITY: Cleveland
                                                                                                                                                                                                                                                                                                                                                                                                                                    6; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1; Indels
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/460,502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  58.0%; Score 101; DB 2;
ilarity 87.5%; Pred. No. 4.4e-08;
Conservative 2; Mismatches 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6 GLRPGSSGPSLKLLSEIKGVIVHRLEGVE 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: GOLTICK, MATY E.
RESISTRATION NUMBER: 34,829
REFERENCE/DOCKET NUMBER: 22727/00120
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER: IBM PC COMPATIBLE OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                TYPE: PRT ORGANISM: synthetic construct US-09-148-711A-10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (216) 622-8458
TELEFAX: (216) 241-0816
INFORMATION FOR SEQ ID NO: 11:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: U.S.A.
ZIP: 44114-2688
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                 Best_Local Similarity 79.33
Matches 23; Conservative
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amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ; MOLECULE TYPE: peptide US-08-460-502-11
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Best Local Similarity
Matches 21; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STRANDEDNESS:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    RESULT 3
US-08-460-502-11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH:
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Gaps
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GENERAL INDORMATION:
APPLICANT: United Biomedical Inc; Walfield, Alan M.;
APPLICANT: Wang, Chang Yi
TITLE OF INVENTION: Synthetic IGE Membrane Anchor
TITLE OF INVENTION: Peptide Immunogens for the Treatment of Allergy
NUMBER OF SEQUENCES: 32
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ö
Sequence II, Application US/09148711A
Fatent No. 6436405
GENERAL INFORMATION:
APPLICANT: The Ohio State University
ITILE OF INVENTION: Synthetic Chimeric Fimbrin Peptides
FILE REFERENCE: 1852-64010
CURRENT APPLICATION NUMBER: US/09/148,711A
CURRENT FILING DATE: 1998-09-04
PRIOR PILING DATE: 1998-06-02
NUMBER OF SEQ ID NOS: 12
SOFTWARE: Patentin version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Length 40;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Query Match 55.2%; Score 96; DB 4; Length 40; Best Local Similarity 87.0%; Pred. No. 2.4e-07; Matches 20; Conservative 2; Mismatches 1; Indels
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US-08-446-692-33 US-08-488-351A-33 US-08-460-105-105 US-08-360-107A-115 US-08-484-223B-105 US-08-475-668A-105 US-08-475-668A-105 US-08-471-913A-105 US-08-471-913A-105 US-08-474-345A-105 US-08-476-686-105 US-08-470-916 US-08-279-700-18 US-08-279-700-18 US-08-279-700-18 US-08-279-700-18 US-08-279-700-18 US-08-279-700-18 US-08-279-700-18 US-08-279-700-18 US-08-279-700-18

105, 105, 16,

ALIGNMENTS

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      GenCore version
Copyright (c) 1993 - 2003
                                              September 24, 2003, 16:46:20
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Maximum Match 100%
Listing first 45 summaries
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                                                                                                    BLOSUM62
Gapop 10.0 , Gapext 0.5
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DB seq length: 200000000
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                                 OM protein
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

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PCT-US95-1341-28
US-08-446-692-20
US-08-446-692-20
US-09-100-4948-1
US-09-100-4948-1
US-09-303-323-1
US-09-70-014-1
US-08-446-692-19
US-08-48-351A-19
US-09-70-014-36
US-09-70-014-36
US-09-70-014-36
US-08-488-351A-55
US-08-488-351A-55
US-08-488-351A-61
US-08-488-351A-65
US-08-488-505
US-08-088-505
US-09-136-125 US-09-148-711A-10 US-08-460-502-11 US-08-460-502-10 Length Query Match Score Result No.

RESULT 1 US-08-460-502-10 US-08-460-502-10 Sequence 10. Application US/08460502 Patent No. 3814364 GENERAL INFORMATION: APPLICANT: Bakeletz Lauren O. APPLICANT: Raumaya, Partin T. TITLE OF INVENTION: Synthetic Chimeric Fimbrin Peptides UNIMER OF SEQUENCES: 11 CORRESPONDENCES: 11 CORRESPONDENCES: 11 CORRESPONDENCES: 11 COUNTRY: OS SQUENTION: Avenue Griswold STREET: 800 SQUENTION		Gaps 0;
SEQUENCE 10, Application US/08460502 SETATE INFORMATION: APPLICANT: Bakaletz, Lauren O. APPLICANT: Raumaya, Parrin T. TITLE OF INVENTION: Synthetic Chimeric Fimbrin Peptides NUMBER OF SEQUENCES: 11 CORRESPONDENCE ADDRESS: ADDRESSE: Calfee, Halter and Griswold STREET: Gold On Superior Avenue CITY: Cleveland STREET: Ohio COMPTR: LOAD ON COMPATION: APPLICATION TYPE: Floppy disk COMPUTER READABLE FORM: MEDIUM TYPE: Polopy disk COMPUTER: DATORNER: DC-DOS/MS-DOS SOFTWARE: Patentin Release #1.0, Version #1.25 CURSENTANEN UNBER: US/08/460,502 SUBTICATION: 424 ATTORNEY/AGENT INFORMATION: RAME: GOLIACA, MAY E. REGISTRATION NUMBER: US/08/460,502 FLILNG DATE: NON UNBER: US/08/460,502 TELEPHONE: (216) 622-8458 TELEPHONE: CALARCTREISTICS: LENGTH: 40 annino acids STRANDEDNESS: single TOOLGY: Linear MOLECULE TYPE: peptide -08-460-502-10 GIRPGASSERIALSELISETKGVIVHRLEGVE 40 12 GIRPGASSERIALISETKGVIVHRLEGVE 40 12 GIRPGASSERIALISETKGVIVHRLEGVE 40		
	pplication US/08460502 3464 MATON: Bakaletz, Lauren O. Kaumaya, Parvin T. VEMINON: Synthetic Chimeric Fimbrin Becources: 11 NCE ADDRESS: Calfee, Halter and Griswold GOO Superior Avenue eveland hio U.S.A. 14-268 AABELE FORM: PC-DOS/MS-DOS Patentin Release #1.0, Version #1.2 IBM PC compatible SYSTEM: PC-DOS/MS-DOS Patentin Release #1.0, Version #1.2 IEM PC COMPATION: IEM PC COMPATION: IEM PC COMPATION: IEM PC COMPATION: ION NUMBER: 34,829 COCKET NUMBER: 34,829 CARION INFORMATION: IIICK, MATY E. IIICK, MATY E. IIICK, MATY E. IICN NUMBER: 34,829 COCKET NUMBER: 34,829 CARION ON: 10: ARACTERISTICS: 40 amino acids ESS: single EINear FE: peptide	Query Match 60.9%; Score 106; DB 2; Length 40; Best Local Similarity 79.3%; Pred. No. 7.9e-09; Matches 23; Conservative 0; Mismatches 6; Indels 6 GLRPGSSGPSLKILSEIKGVIVHRLEGVE 34 1

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Sequence 231, Application US/10285976

Sequence 231, Application US/10285976

Sequence 231, Application US/2030165500A1

GENERAL INDORMATION:

APPLICANT: Rhee, Chae-Seo

APPLICANT: Malini, Sen

APPLICANT: Malini, Sen

APPLICANT: Locar, Lorenzo M.

APPLICANT: Carson, Dennis A.

APPLICANT: Carson, Dennis A.

APPLICANT: The Regents of the University of California

APPLICANT: The Regents of the University of California

TITLE OF INVERTION: Mat and Frizzled Receptors as Targets for Immunotherapy

TITLE OF INVERTION: Made and Neck Squamous Cell Carcinomas

FILE REFERENCE: 023070-13032008

CURRENT APPLICATION NUMBER: US/10/285, 976

CURRENT FILING DATE: 2002-11-01

PRIOR APPLICATION NUMBER: US 60/287, 995

PRIOR APPLICATION NUMBER: WO PCT/US02/13802

PRIOR FILING DATE: 2002-05-01

PRIOR FILING DATE: 2002-05-01

NUMBER OF SEQ ID NOS: 232

SOFTWARE: PAT

ORGANISM: Artificial Sequence

FEATURE:

OTHER INFORMATION: Description of Artificial Sequence:PMMVF-2D2

OTHER INFORMATION: frizzled domain

US-10-285-976-231
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Pred. No. 0.00077;
1; Mismatches 1; Indels
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; TYPE: PRT
; ORGANISM: Artificial Sequence
; FEATURE:
; CTHER INFORMATION: PMMVF-FZD2
US-09-847-102A-33
                                                                                                                                            Query Match 46.0%;
Best Local Similarity 89.5%;
Matches 17; Conservative
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US-10-285-976-231
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Search completed: September 24, 2003, 17:33:08 Job time : 17.0471 secs

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OTHER INFORMATION: Chimeric peptide made up of amino acid sequence 288-302 of the OTHER INFORMATION: asels virus fusion protein, F linked by a spacer peptide to am OTHER INFORMATION: acid sequence 2-10 of the GRRH hormone NAME/KEY: MOD_RES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: PEPTIDE
LOCATION: (1)..(15)
OTHER INFORMATION: Peptide corresponds to the amino acid sequences 288-302 of the
OTHER INFORMATION: measles virus fusion protein, F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: PEPTIDE
LOCATION: (23)..(31)
OTHER INFORMATION: Peptide corresponds to amino acid sequences 2-10 of the human
OTHER INFORMATION: GRRH hormone
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Corr, Maripat
APPLICANT: Rhee, Chae-Seo
APPLICANT: Lorenzo, Leoni M.
APPLICANT: Lorenzo, Leoni M.
APPLICANT: Lorenzo, Leoni M.
TITLE OF INVENTION: STUDYING AND TREATIONS AND METHODS FOR
TITLE OF INVENTION: STUDYING AND TREATING CANCERS EXPRESSING FRIZZLED ANTIGENS
FILE REFERENCE: 22000-20629.00
CURRENT APPLICATION NUMBER: US/09/847,102A
CURRENT FILING DATE: 2001-05-01
NUMBER OF SEO ID NOS: 138
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                LOCATION: (31)..(31) OTHER INFORMATION: Amidated glycine or glycinamide
                                                                                                                               Sequence 9, Application US/09848834A
PREAT NO. US20020076416A1
GENERAL INFORMATION:
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR PAPLICATION NUMBER: 60/202,328
PRIOR PLILNG DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SEQ ID NO 9
LENGTH: 31
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APPLICANT: University of California APPLICANT: Carson, Dennis A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LOCATION: (1)..(1)
OTHER INFORMATION: Amidated Lysine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NAME/KEY: PEPTIDE
LOCATION: (19)..(22)
OTHER INFORMATION: Spacer peptide
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  2 HWSYGLRPGSSGPSL 16
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US-09-847-102A-33
                                                                                RESULT 13
US-09-848-834A-9
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Matches 1
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                      LOCATION: (17)..(37)
OTHER INFORMATION: Amino acid sequence 947-967 of the Tetanus toxoid precursor (Tent OTHER INFORMATION: oxylysin
NAME/KEY: PEPTIDE
LOCATION: (38)..(41)
OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTIDE
LOCATION: (42)..(50)
COTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH hormone
US-09-848-834A-18
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of human OTHER INFORMATION: GRRH linked by a spacer to amino acid sequence 378-398 of Plasmod OTHER INFORMATION: ium falciparum circumsporozoite (CSP) protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NAME/KEY: PEPTIDE
LOCATION: (11)...(16).
OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTIDE
LOCATION: (17)...(36)
OTHER INFORMATION: Amino acid sequence 378-398 of the Plasmodium falciparum
OTHER INFORMATION: circumsporozoite (CSP) protein
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OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
NAME/KEY: MOD_RES.
LOCATION: (51)..(51)
OTHER INFORMATION: Amidated glycine or glycinamide
LOCATION: (1)..(10)
OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone
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OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTINE
LOCATION: (43)...(51)
OTHER INFORMATION: Amino acid sequence 2-10 of the human GDRH hormone
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                                                                                                                                                                                                                                                                                                                   Query Match 50.0%; Score 87; DB 9; Length 50; Best Local Similarity 100.0%; Pred. No. 5e-05; Matches 15; Conservative 0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence 20, Application US/09848834A
Patent No. US20020076416A1
GENERAL INFORMATION:
APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.0
LENGTH: 51
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Best Local Similarity 100.4
Matches 15; Conservative
NAME/KEY: PEPTIDE
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OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of hum OTHER INFORMATION: GRRH linked by a spacer to amino acid sequence 947-967 of the OTHER INFORMATION: anus toxold precursor (Tentoxylysin) protein linked by a space OTHER INFORMATION: o amino acid sequence 2-10 of human GRRH MAME/KES: MOD_KES LOCATION: (1)..(1)
OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
NAME/KES: MOD_KES
LOCATION: (50)..(50)
OTHER INFORMATION: Amidated glycine or glycinamide
                                                                                                                                                                                                                                                    OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of the OTHER INFORMATION: nRH hormone linked by a spacer to amino acid sequence 947-967 oTHER INFORMATION: he Tetanus toxoid precursor (Tentoxylysin)
NAME/KER: MOD_RES
LOCATION: (1)...(1)
OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
NAME/KEY: PEPTIDE
LOCATION: (1)...(10)
OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone
LOCATION: (11)...(16)
OTHER INFORMATION: Spacer peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   sequence 947-967 of the Tetanus toxoid precursor
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Pred. No. 3.5e-05;
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CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR PILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: PatentIn version 3.0
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  CURRENT APPLICATION NUMBER: US/09/848,834A
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US-09-848-834A-18
Sequence 18, Application US/09848834A
Patent No. US20020076416A1
GENERAL INFORMATION:
APPLICANT: Aphton Corporation
                   CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
SUMBER OF SED ID NOS: 20
SOFTWARE: PatentIn version 3.0
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100.0%; Pre
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LOCATION: (11)...(16)
OTHER INFORMATION: Spacer peptide
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OTHER INFORMATION: Amino acid seq
OTHER INFORMATION: (Tentoxylysin)
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Best Local Similarity 100.'
Matches 15; Conservative
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LENGTH: 37
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LOCATION: (1) ...(1)
OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
NAME/KEY: PEPTIDE
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                                     CCATTON: (32)..(37)
COTHER INFORMATION: Spacer peptide
NAMENEXE: PEPTIDE
LOCATION: (38)..(46)
OTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH hormone US-09-848-834A-19
                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: (1)..(10)
OTHER INFORMATION: Amino acid sequence 1-10 of the human GRRH hormone NAME/KEY: PEPTIDE
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OTHER INFORMATION: Spacer peptide

NAME/KEY: PEPTIDE

LOCATION: (17)..(36)

OTHER INFORMATION: (Anino acid sequence 378-398 of the Malaria

OTHER INFORMATION: (Plasmodium falciparum) circumsporozoite

OTHER INFORMATION: (CSP) protein
                                                                                                                                                                                                       Score 89; DB 9; Length 46;
Pred. No. 2.4e-05;
2; Mismatches 1; Indels
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100.0%; Pred. No. 3.4e-05;
tive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR APPLICATION NUMBER: 50/202,328
NUMBER OF SEQ ID NOS: 200
SEQ ID NOS: 200
SEQ ID NO 16
LENGTH: 36
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APPLICANT: Aphton Corporation
ITILE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
                                                                                                                                                                                                                                                            2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; Sequence 16, Application US/09848834A; Patent No. US20020076416A1
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; Patent No. US20020076416A1
OTHER INFORMATION: (Tentoxylysin)
NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                           2 HWSYGLRPGSSGPSLKLL 19
                                                                                                                                                                                                                                                                                                                                    2 HWSYGLRPGSSGPSLQYI 19
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                                                                                                                                                                                                               51.1%;
83.3%;
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                                                                                                                                                                                      Query Match
Best Local Similarity 83.3.
Best Local 5; Conservative
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Best Local Similarity
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OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of ^{-}\mathrm{hc} OTHER INFORMATION: RH hormone linked by a spacer to amino sequence 830-844 of ^{-}\mathrm{hc} OTHER INFORMATION: tanus toxoid precursor (Tentoxylysin)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of ham oTHER INFORMATION: GRH linked by a spacer to amino acid sequence 830-844 of Tema OTHER INFORMATION: toxoid precursor (Tentoxylysin) linked by a spacer to amino in OTHER INFORMATION: sequence 1-10 of GRH NAME/KEY: MOD_RES
LOCATION: (1). (1)
OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
NAME/KEY: MOD_RES
LOCATION: (46). (46)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         LOCATION: (17)..(31)
OTHER INFORMATION: Amino acid sequence 830-844 of the Tetanus toxoid precursor OTHER INFORMATION: (Tentoxylysin)
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                                                                                                                                                                                                                                                                                                                                                                    NAME/KEY: PEPTIDE
LOCATION: (1)..(10)
OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone
NAME/KEY: PEPTIDE
LOCATION: (11)..(16)
OTHER INFORMATION: Spacer peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 31;
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                                                                                                                                                                                                                                                                                             NAME/KEY: MOD_RES
LOCATION: (1)..(1)
OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
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OTHER INFORMATION: Amidated glycine or glycinamide
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Patent No. US20020076416a1
GENERAL INFORMATION:
APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR PILING DATE: 2000-05-05
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          51.1%; Score 89; DB 9; 83.3%; Pred. No. 1.5e-05; Live 2; Mismatches 1
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OTHER INFORMATION: Spacer peptide
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  PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: PatentIn version 3.0
SEQ ID NO 15
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                                                                                                                                                               ORGANISM: Artificial Sequence
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Best Local Similarity 83.3'
Matches 15; Conservative
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US-09-848-834A-19
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LENGTH: 46
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                                                                                                             LENGTH:
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23 GLQPGAGGTPGGPGGGAPPRYATLEHPFHCGPSLKLLSLIKGVIVHRLEGVE 75
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ------GPSLKLLSEIKGVIVHRLEGVE 34
                                                                                                                                                                                                                                                                                                                                                                    CTHER INFORMATION: Description of Artificial Sequence:PFZD2-MMVF; OTHER INFORMATION: measles virus fusion (MVF) epitope fused to : OTHER INFORMATION: frizzled domain 05-10-285-976-229
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Pred. No. 6.2e-07;
2; Mismatches 2; Indels
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Sublication No. US20030113344A1

GENERAL INFORMATION:
APPLICANT: Bataletz, Lauren O.
APPLICANT: Raumaya, Pravin T.P.
TITLE OF INVENTION: Synthetic Chimeric Fimbrin Peptides
FILE REFERENCE: 1825/04658
CURRENT ALPLICATION NUMBER: US/10/223,711
CURRENT ALPLICATION NUMBER: 09/148,711
PRIOR APPLICATION NUMBER: 09/148,711
PRIOR FILING DATE: 1998-09-04
PRIOR FILING DATE: 1998-09-04
PRIOR FILING DATE: 1998-06-02
NUMBER OF SEQ ID NOS: 12
SOFWARE: Patentin version 3.1
LENGTH: 40
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Best Local Similarity 87.0%; Pred. No. 2.1e-06;
Matches 20; Conservative 2; Mismatches 1; Indels
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Patent No. US20020076416A1
GENERAL INFORMATION:
APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
                   CURRENT APPLICATION NUMBER: US/10/285,976
CURRENT FILING DATE: 2002-11-01
PRIOR APPLICATION NUMBER: US 60/287,995
PRIOR FILING DATE: 2001-05-01
PRIOR FILING DATE: 2001-05-01
PRIOR FILING DATE: 2005-01
NUMBER OF SEQ ID NOS: 232
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 229
LENGTH: 75
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FILE REFERENCE: 023070-130320US
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Best Local Similarity 47.2%;
Matches 25; Conservative 7
                                                                                                                                                                                                                                                                                                TYPE: PRT
ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             6 GLRPGSS------
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Gaps

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APPLICANT: COIL, Maripat
APPLICANT: Rhee, Chae-Seo
APPLICANT: Rhee, Chae-Seo
APPLICANT: Lorenzo, Leoni M.
APPLICANT: Lorenzo, Leoni M.
APPLICANT: Lorenzo, Leoni M.
TITLE OF INVENTION: IMMUNOLOGIC COMPOSITIONS AND METHODS FOR
TITLE OF INVENTION: STUDYING AND TREATING CANCERS EXPRESSING FRIZZLED ANTIGENS
FILE REFERENCE: 22000-20659-00
CURRENT APPLICATION NUMBER: US/09/847,102A
NUMBER OF SEQ ID MOSE: 138
SOFTWARE: FASTESQ for Windows Version 4.0
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APPLICANT: The Regents of the University of California
TITLE OF INVENTION: Wht and Frizzled Receptors as Targets for Immunotherapy
TITLE OF INVENTION: in Head and Neck Squamous Cell Carcinomas
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
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Pred. No. 8.2e-08;
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                                                                                                                                                                                                                                                                                                                                                                                                                           CTHER INFORMATION: synthetic construct US-10-223-711-10
          CURRENT FILING DATE: 2002-08-19
PRIOR APPLICATION NUMBER: 09/148,711
PRIOR FILING DATE: 1998-09-04
PRIOR APPLICATION NUMBER: 08/460,502
PRIOR FILING DATE: 1995-06-02
NUMBER OF SEQ ID NOS: 12
SEQ ID NO 10
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Publication No. US20030165500A1
GENERAL INFORMATION:
APPLICANT: Rhee, Chae-Seo
APPLICANT: Malini, Sen
APPLICANT: Wu, Christina
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            US-09-847-102A-31
Sequence 31, Application US/09847102A
Publication No. US20030044409A1
GENERAL INFORMATION:
APPLICANT: University of California
APPLICANT: Carson, Dennis A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               60.98;
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US-09-847-102A-31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ORGANISM: Artificial sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Leoni, Lorenzo M.
Corr, Maripat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6 GLRPGSS------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local Similarity 79.3%
----hos 23; Conservative
                                                                                                                                                                                                                                                                                                                                                              ORGANISM: Artificial
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           US-10-285-976-229
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APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                          LENGTH: 40
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LENGTH: 75
                                                                                                                                                                                                                                                                                                                                  TYPE: PRT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of the Gr
OTHER INFORMATION: RH hormone linked by a spacer to amino acid sequence 288-302 of
OTHER INFORMATION: the Measles virus protein F linked by a spacer to amino acid seq
OTHER INFORMATION: uence 2-10 of the GRH hormone
NAME/REY: MOD_RES
LOCATION: (1). (1)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION: (19)...(34)
OTHER INFORMATION: Amino acid sequence 288-302 of the Measles virus fusion protein, NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ö
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OTHER INFORMATION: Amidated-glycine or glycinamide

NAME/KEY: PEPTIDE

LOCATION: (1)...(10)

OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone

NAME/KEY: PEPTIDE

LOCATION: (11)...(18)

OTHER INFORMATION: Spacer peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                         Gaps
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OTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH hormone
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Publication No. US20030113344A1
GENERAL INFORMATION:
APPLICANT: Bakaletz, Lauren O.
APPLICANT: Kaumaya, Pravin T.P.
TILE OF INVENTION: Synthetic Chimeric Fimbrin Peptides
FILE REPERENCE: 18525/04088
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      0;
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Best Local Similarity 100.0%; Pred. No. 3.7e-17;
Matches 33; Conservative 0; Mismatches 0;
                 Pred. No. 2.6e-17;
                                                                                                                                                                                                                                                                                                                                                       Sequence 17, Application US/09848834A
Patent No. US20020076416A1
GENERAL INFORMATION:
APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 HINDER STATE OF THE STATE OF TH
                                                                                                                  2 HWSYGLRPGSSGPSLKLLSEIKGVIVHRLEGVE 34
                                                                                                                                                      2 HWSYGLRPGSSGPSLKLLSEIKGVIVHRLEGVE 34
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100.0%; Preu. ...
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR PPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.0
SEQ ID NO 17
LENGTH: 47
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           : CURRENT APPLICATION NUMBER: US/10/223,711
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OTHER INFORMATION: Spacer peptide NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ORGANISM: Artificial Sequence
                 Best Local Similarity 100.
Matches 33; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: MOD_RES
                                                                                                                                                                                                                                                                                       RESULT 2
US-09-848-834A-17
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us-09-848-834a-13.rapb

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GenCore version 5.1.6

Copyright (c) 1993 - 2003 Compugen Ltd.

OM protein - protein search, using sw model

Run on: September 24, 2003, 16:57:10; Search time 17.0471 Seconds

Title: US-09-848-834A-13

Perfect score: 174

Sequence: 1 XHWSYGLRPGSSGPSLKLLSEIKGVIVHRLEGVE 34

Scoring table: BLOSUM62

Gapop 10.0, Gapext 0.5

Searched: 566894 seqs, 151307093 residues

Total number of hits satisfying chosen parameters: 566894

Minimum DB seq length: 2000000000

Maximum Match 0%

Maximum Match 100%

Listing first 45 summaries
```

Published_Applications_AA:*

| cgn2_6/ptodata/2/pubpa4/US07_PUBCOMB.pep:*
2: | cgn2_6/ptodata/2/pubpa4/US07_PUBCOMB.pep:*
3: | cgn2_6/ptodata/2/pubpa4/US06_NEW_PUB.pep:*
4: | cgn2_6/ptodata/2/pubpa4/US06_PUBCOMB.pep:*
5: | cgn2_6/ptodata/2/pubpa4/US08_PUBCOMB.pep:*
6: | cgn2_6/ptodata/2/pubpa4/US08_NEW_PUB.pep:*
7: | cgn2_6/ptodata/2/pubpa4/US08_NEW_PUB.pep:*
8: | cgn2_6/ptodata/2/pubpa4/US08_NEW_PUB.pep:*
9: | cgn2_6/ptodata/2/pubpa4/US08_PUBCOMB.pep:*
11: | cgn2_6/ptodata/2/pubpa4/US09_PUBCOMB.pep:*
11: | cgn2_6/ptodata/2/pubpa4/US09_PUBCOMB.pep:*
12: | cgn2_6/ptodata/2/pubpa4/US09_PUBCOMB.pep:*
13: | cgn2_6/ptodata/2/pubpa4/US09_PUBCOMB.pep:*
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15: | cgn2_6/ptodata/2/pubpa4/US09_PUBCOMB.pep:*
16: | cgn2_6/ptodata/2/pubpa4/US10_PUBCOMB.pep:*
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18: | cgn2_6/ptodata/2/pubpa4/US10_NEW_PUB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description	Sequence 13, Appl	Sequence 17, Appl	Sequence 10, Appl	Sequence 31, Appl	Sequence 229, App	Sequence 11, Appl	Sequence 15, Appl	Sequence 19, Appl	Sequence 16, Appl	14,	Sequence 18, Appl	Sequence 20, Appl	Sequence 9, Appli	Sequence 33, Appl	Sequence 231, App
	ID	US-09-848-834A-13	US-09-848-834A-17	US-10-223-711-10	US-09-847-102A-31	US-10-285-976-229	US-10-223-711-11	US-09-848-834A-15	US-09-848-834A-19	US-09-848-834A-16	US-09-848-834A-14	US-09-848-834A-18	US-09-848-834A-20	US-09-848-834A-9	US-09-847-102A-33	US-10-285-976-231
	DB	σ	σ	15	11	12	15	σ	6	σ	σ	6	σ	σ	11	12
	Match Length DB	34	47	40	75	75	40	31	46	36	37	50	51	31	75	75
% Ouerv	Match	99.4	4.66	6.09	58.6	58.6	55.2	51.1	51.1	50.0	50.0	50.0	50.0	49.4	46.0	46.0
	Score	173	173	106	102	102	96	83	88	87	87	87	87	86	80	80
Result	NO.	-	7	٣	4	S	9	7	œ	6	10	11	12	13	14	15

Sequence 8, Appli Sequence 16, Appl Sequence 30, Appl Sequence 22, Appli Sequence 22, Appli Sequence 20, Appli	9, 4 18, 4 37, 4	3, 48, 51,	141, 141, 35, 38, 42,	Sequence 30, Appl. Sequence 32, Appl. Sequence 34, Appl. Sequence 49, Appl. Sequence 55, Appl. Sequence 38, Appl. Sequence 11, Appl.
Þ	12 US-10-076-674-9 10 US-09-873-233A-18 10 US-09-873-233A-20 11 US-09-305-924-4 11 US-09-747-802-37		11 US-09-865-294-43 11 US-09-951-061A-141 11 US-09-747-802-35 11 US-09-747-802-40 11 US-09-747-802-40 11 US-09-747-802-42	2002444
15 15 15 15	45 550 550 17 15	110001	662 115 115 115	100000000000000000000000000000000000000
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77 72 72 72 72 72 72 72 72 72 72 72 72 7	72 72 72 71 69	00000000000000000000000000000000000000	0000000	0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0
16 117 118 20 21	2 2 2 3 2 4 2 5 4 3 2 5 4	27 28 30 31	7	338 399 444 444 5

ALIGNMENTS

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RESULT 1

US-09-484-834-13

US-09-484-814-13

US-09-484-814-13

Sequence 13, Application US/09848834A

Patent No. US200200056416A1

GENERAL INFORMATION:

APPLICANT: Aphton Corporation

TITLE OF INVENTION: Chimeric Peptide Immunogens

FILE REPERENCE: 1102865-0047

CURRENT PILING DATE: 2001-05-04

PRIOR FILING DATE: 2000-05-05

NOWBER OF SED ID NOSS: 20

SOFTWARE: PatentIn version 3.0

SED ID NO 13

LENGTH: 34

TYPE: PRT

TYPE: PRT

OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of The OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of The NAME/KEY: PEPTIDE

COATION: (1) ...(10)

OTHER INFORMATION: Amino acid sequence 1-10 of the human GRRH hormone

NAME/KEY: PEPTIDE

COATION: (1) ...(18)

OTHER INFORMATION: Amino acid sequence 288-302 of the Measles

LOCATION: (1) ...(10)

OTHER INFORMATION: Amino acid sequence 288-302 of the Measles

LOCATION: (1) ...(10)

OTHER INFORMATION: Amino acid sequence 288-302 of the Measles

LOCATION: (1) ...(10)

OTHER INFORMATION: Amino acid sequence 288-302 of the Measles

LOCATION: (1) ...(10)

OTHER INFORMATION: Amino acid sequence 288-302 of the Measles

LOCATION: (1) ...(10)

OTHER INFORMATION: Amino acid sequence 288-302 of the Measles

LOCATION: (1) ...(10)

OTHER INFORMATION: Amino acid sequence 288-302 of the Measles

LOCATION: (1) ...(10)

OTHER INFORMATION: Amino acid sequence 288-302 of the Measles

LOCATION: (1) ...(10)

OTHER INFORMATION: Amino acid sequence 288-302 of the Measles

LOCATION: (1) ...(10)

OTHER INFORMATION: Pyroglutamic acid or 5-corproline

USCATION: (1) ...(10)

STATEM INFORMATION: Pyroglutamic acid or 5-corproline
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DB 9; Length 34;

99.4%; Score 173;

Query Match

```
C; Superfamily: parainfluenza virus cell fusion protein
C; Keywords: glycoprotein; membrane fusion; transmembrane protein
F; 1188 Product: cell fusion glycoprotein F2 *status predicted <FP2>
F; 194 -631/Product: cell fusion glycoprotein F1 *status predicted <FP1>
F; 194 -631/Product: cell fusion glycoprotein F1 *status predicted <FP1>
F; 194 -219/Domain: transmembrane *status predicted <TM2>
F; 195 -595/Domain: transmembrane *status predicted <TM2>
F; 110,142/Binding site: carbohydrate (Asn) (covalent) *status predicted <UM2>
F; 110,142/Binding site: carbohydrate (Asn) (covalent) *status predicted <UM2

Ouery Match
Best Local Similarity 68.4%; Pred. No. 0.53;
Matches 13; Conservative 2; Mismatches 4; Indels 0; Gaps 0;

Oy 15 SIKLLSEIKGVIVHRLEGY 33

Ob 365 SYPTLSEVKGVVVHRLEAY 383
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Search completed: September 24, 2003, 17:49:32 Job time: 11.9612 secs

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cell fusion glycoprotein precursor - phocine distemper virus
N;Contains: fusion protein F1
N;Contains: fusion protein F2
Species: phocine distemper virus
C;Decession: 001368
C;Date: 30-Sep-1992 #sequence_revision 30-Sep-1992 #text_change 25-Oct-1996
C;Accession: 001368
R;Koevamees, J; Blixenkrone-Moeller, M.; Sharma, B.; Oervell, C.; Norrby, E.
J; Gen. Virol. 72, 2959-2966, 1991
A;Telte: The nucleotide sequence and deduced amino acid composition of the haemagglut
A;Reference number: 001368; MUID:92113538; PMID:1765768
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Cyaccession: A48346
R;Curran, M.D.; Lu, Y.J.; Rima, B.K.
Arch. Virol. 126, 159-169, 1992
A;Reference number: A48346; MUID:92398437; PMID:1524494
  A; Description: Nucleotide sequence comparisons of the F and M genes of cetacean morbi A; Reference number: \$47034
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       cell fusion glycoprotein precursor - phocine distemper virus (strain Ulster/88) N.Contains: fusion protein F1; fusion protein F2 C.Species: phocine distemper virus C.Species: phocine distemper virus C.Species: 17-Feb-1994 #sequence_revision 17-Feb-1994 #text_change 25-Oct-1996
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 F;110,142,148,486/Binding site: carbohydrate (Asn) (covalent) #status predicted
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                                                                                                   A; Residues: 1-552 CBOL>
A; Residues: 1-552 EMBL:X80757; NID:9520639; PIDN:CAA56731.1; PID:9520640
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       A;Note: sequence extracted from NCBI backbone (NCBIN:113098, NCBIP:113099) C;Genetics:
A;Gene: F
                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C.Keywords: glycoprotein; membrane fusion; transmembrane protein
F;1-184Pyroduct; cell fusion glycoprotein F2 *status predicted <FP2>
F;89-106/Domain: transmembrane *status predicted <TM1>
F;189-193/Region: cleavage processing *status predicted
F;194-631/Product: cell fusion glycoprotein F1 *status predicted <FP1>
F;194-212/Domain: transmembrane *status predicted <TM2>
F;575-595/Domain: transmembrane *status predicted <TM3>
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                                                                                                                                                                                                                                                                                                                                  Length 552;
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                                                                                                                                                                                                                                                                                                                                                                                        1; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4; Indels
                                                                                                                                                                  A; Experimental source: isolate Ulster 88
A; Note: the source is designated as Cetacean morbillivirus
                                                                                                                                                                                                                      C;Superfamily: parainfluenza virus cell fusion protein F;1-25/Domain: signal sequence #status predicted <SIG>F;26-552/Product: fusion protein #status predicted <MAT>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              C; Superfamily: parainfluenza virus cell fusion protein
                                                                                                                                                                                                                                                                                                                                  Score 65; DB 2;
Pred. No. 0.46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1;
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                                                                                                                                                                                                                                                                                                                                                                                        1; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 65;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             15 SLKLLSEIKGVIVHRLEGV 33
                                                                                                                                                                                                                                                                                                                                  37.4%;
86.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        290 LSEVKGVIVHRLEAV 304
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       37.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 68.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                              19 LSEIKGVIVHRLEGV 33
                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity 86.7
Matches 13; Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A; Molecule type: genomic RNA A; Residues: 1-631 <KOV>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Query Match
Best Local Similarity
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A; Residues: 1-631 <CUR>
                                                                                     A; Molecule type: mRNA
                                                      A; Accession: S47034
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                                                                                                                                                                                                                                                                                                                                                   A,Title: The nucleotide sequence of the gene encoding the F protein of canine distemper A,Reference number: JS0321; MUID:88129050; PMID:3433924
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      C.Species: canine distemper virus
C.Species: canine distemper virus
C.Species: canine distemper virus
C.Accession: S21382
C.Accession: S21382
R.William, R.Bennard, A.; Spehner, D.; Villeval, D.; Drillien, R.
Submitted to the EMBL Data Library, April 1992
A.Description: Vaccination of mice against canine distemper virus induced encephalitis A.Reference number: S21382
A.Accession: S21382
A.Status: preliminary
A.Molecule type: genomic RNA
A.Residues: 1-662 <WILL>
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N;Alternate names: F protein
C;Species: porpoise morbillivirus
C;Date: 19-mar-1997 #sequence_revision 19-Mar-1997 #text_change 24-Nov-1999
C;Accession: S47034
R;Bolt, G.; Gottschalck, E.; Blixenkkrone-Moeller, M.; Wishaupt, R.G.A.; Welsh, M.J.; submitted to the EMBL Data Library, July 1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 predicted
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                                                                                                                                                            cell fusion glycoprotein precursor - canine distemper virus
N;Contains: fusion protein F1; fusion protein F2
C;Species: canine distemper virus
C;Date: 30-Jun_1991 #sequence_revision 30-Jun-1991 #text_change 16-Jul-1999
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                  A;Molecule type: mRNA
A;Residues: 1-662 <BAR>
A;Cross-references: GB:M21849; NID:9323241; PIDN:AAA42878.1; PID:9323242
C;Genetics:
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C;Superfamily: parainfluenza virus cell fusion protein
C;Keywords: glycoprotein; membrane fusion; transmembrane protein
F;I-135/Domain: signal sequence #status predicted <SIG>
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        4; Indels
                                                                                                                                                                                                                                                                      C; Accession: JS0321
R; Barrett, T.; Clarke, D.K.; Evans, S.A.; Rima, B.K.
Virus Res. 8, 373-386, 1987
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Pred. No. 0.41;
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ilarity 73.7%;
Conservative
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hes 14; Conservative
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nes 14; Conserv
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Matches
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Coll fusion protein F0 precursor - phocine distemper virus
N;Contains: F1 and F2 chains
C;Specias: phocine distemper virus
C;Specias: phocine distemper virus
C;Date: 14-Unl-1994 #sequence_revision 14-Jul-1994 #text_change 24-Nov-1999
C;Accession: JQ2223
R;Visser, I.K.G.; van der Heljden, R.W.J.; van de Bildt, M.W.G.; Kenter, M.J.H.; O@rv J. Gen. Virci. 74, 1989-1994, 1993
A;Title: Fusion protein gene nucleotide sequence similarities, shared antigenic sites
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  C;Accession: A28921
R;Tsukiyama, K.; Yoshikawa, Y.; Yamanouchi, K.
Virology 164, 523-530, Yoshikawa, Y.; Yamanouchi, K.
Virology 164, 523-530, Yoshikawa, Y.; Yamanouchi, K.
Virology 164, 523-530, Yoshikawa, Y.; Yamanouchi, K.
A;Title: Fusion glycoprotein (F) of rinderpest virus: entire nucleotide sequence of A;Title: Assocssion: A28921; MUID:88219541; PMID:3285575
A;Moccossion: A28921
A;Molecule type: mRNA
A;Molecule type: mRNA
A;Residues: 1-546 <TSU>
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N;Contains: fusion glycoprotein F1; fusion glycoprotein F2
C;Species: rinderpest virus
C;Species: 30-Sep-1989 #sequence_revision 30-Sep-1989 #text_change 16-Jul-1999
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C.Superfamily: parainfluenza virus cell fusion; transmembrane protein
C.Keywords: glycoprotein; membrane fusion; transmembrane protein
F;119/Domain: signal sequence #status predicted <SIG>
F;20-104/Product: cell fusion glycoprotein F2 #status predicted <FG2>
F;105-546/Product: cell fusion glycoprotein F1 #status predicted <FG1>
F;109-133/Domain: transmembrane #status predicted <TN1>
F;485-513/Domain: transmembrane #status predicted <TN2>
F;25,57,63/Binding site: carbohydrate (Asn) (covalent) #status predicte
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A; Cross-references: GB:L07075
A; Note: the authors translated the codon ATC for residue 4 as Leu
C; Comment: This fusion protein F0 is cleaved into F1 and F2 chains.
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Pred. No. 0.33;
0; Mismatches 1; Indels
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A; Accession: JQ2223
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73.78;
                  284 LSEIKGVIIHRLEGV 298
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Best Local Similarity 73.7
Matches 14; Conservative
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C; Species: Inderpest virus
C; Species: 20-Oct-1994 #sequence_revision 08-Sep-1995 #text_change 20-Sep-1999
C; Accession: S47305; S47301
R; Baron, M.D.; Barrett, T.
R; B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A.Cross-references: EMBL:230697; NID:9535396; PIDN:CAA83181.1; PID:9535401; EMBL:230700; C.Superfamily: parainfluenza virus cell fusion protein
C.Keywords: transmembrane protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       C; Accession: A31051
R; Hsu, D.; Yamanaka, M.; Miller, J.; Dale, B.; Grubman, M.; Yilma, T.
R; Hsu, D.; Yamanaka, M.; Hiller, J.; Dale, B.; Grubman, M.; Yilma, T.
A; Title: Cloning of the fusion gene of rinderpest virus: comparative sequence analysis A; Reference number: A31051; MUID:88322864; PMID:3413983
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ö
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A. Molecule type: genomic RNA
A. Rocession: A31051
A. Molecule type: genomic RNA
A. Residues: 1-546 cHSU>
C. Genetics:
A. Genetics:
C. Superfamily: parainfluenza virus cell fusion protein
C. Superfamily: parainfluenza virus cell fusion protein
C. Superfamily: parainfluenza virus cell fusion; transmembrane protein
F. 1-19, Toomain: signal sequence #status predicted <SIG>
F. 20-108/Product: cell fusion glycoprotein F2 #status predicted <FFI>
F. 109-346/Product: cell fusion glycoprotein F1 #status predicted <FFI>
F. 109-134/Domain: transmembrane #status predicted <TNA>
F. 491-513/Domain: transmembrane #status predicted <TNA>
F. 491-513/Bomain: transmembrane #status predicted <TNA>
F. 52,57,63,518/Binding site: carbohydrate (Asn) (covalent) #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              cell fusion glycoprotein precursor - rinderpest virus (strain Kabete O) N;Contains: fusion glycoprotein F1; fusion glycoprotein F2 C;Species: rinderpest virus C;Species: 31-Dec:1989 #sequence_revision 31-Dec:1989 #text_change 25-Oct-1996
                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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C;Keywords: glycoprotein; membrane fusion; transmembrane protein F;1-25/Domain: signal sequence *status predicted <SIG> F;76-10.Product: cell fusion glycoprotein F2 *status predicted <FF2> F;111-553/Product: cell fusion glycoprotein F1 *status predicted <FF1> F;111-553/Product: cell fusion glycoprotein F1 *status predicted <FF1> F;501-517/Domain: transmembrane *status predicted <TMN> F;32,64,70/Binding site: carbohydrate (Asn) (covalent) *status predicted
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                                                                                                                                                                                                                                                                                                             Query Match 41.4%; Score 72; DB 1; Length 553; Best Local Similarity 100.0%; Pred. No. 0.047; Matches 15; Conservative 0; Mismatches 0; Indels
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Pred. No. 0.065;
1; Mismatches
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Best Local Similarity 93.3%;
Matches 14; Conservative
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Best Local Similarity 93.33
Matches 14; Conservative
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R.Mori, T.; Sasaki, K.; Hashimoto, H.; Makino, S.
Virus Genes 7, 67-81, 1993
A;Title: Molecular cloning and complete nucleotide sequence of genomic RNA of the AIK
A;Reference number: A48556; MUID:9327570; PMID:8470368
A;Recession: E48556
cell fusion glycoprotein precursor - measles virus (strain AIK-C)
C;Species: measles virus
C;Date: 17-Peb-1994 #sequence_revision 17-Peb-1994 #text_change 16-Jul-1999
C;Accession: E48556
                                                                                                                                                                                                                                                                                                                                                                     A;Molecule type: genomic RNA
A;Residues: 1-550 ckNR>
A;Cross-references: GB:558435; NID:g299460; PIDN:AAB26145.1; PID:g299465
A;Cross-reference extracted from NCBI backbone (NCBIN:129264, NCBIP:129272)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A.Gene: F
C.Superfamily: parainfluenza virus cell fusion protein
C.Superfamily: parainfluenza virus cell fusion; transmembrane protein
C.Keywords: glycoprotein; membrane fusion; transmembrane protein
F.1-22/Domain: signal sequence #status predicted <FIGS-
F.23-107/Product: cell fusion glycoprotein F1 #status predicted <FFI>F.113-138/Region: hydrophobia.
F.113-138/Region: hydrophobia.
F.495-514/Domain: transmembrane #status predicted <TMMS
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Pred. No. 0.047;
); Mismatches 0; Indels
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A; Residues: 272-553 <SCH2>
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Best Local Similarity
Matches 15; Conserv
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C:Species: rinderpest virus
R:Zarans, S.A.; Barron, M.D.; Chamberlain, R.W.; Goatley, L.; Barrett, T.
Submitted to the EMBL Data Library, March 1994
A:Description: The complete nucleotide sequence of the fusion protein gene of the vaccin
A:Reference number: S47300
A:Reference number: S47300
A:Residues: 1-546 cEVA>
A:Rolecule type: DNA
A:Residues: 1-546 cEVA>
A:Cross-references: EMBL:Z31656; NID:9535406; PIDN:CAA83482.1; PID:9535407
B:Chamberlain, R.W.; Wamwayl, H.M.; Hockley, E.; Shaila, M.S.; Goatley, L.; Knowles, N.J.
J. Gen. Virol. 74, 2775-2780, 1993
A:Residues: Pavidence for different lineages of rinderpest virus reflecting their geographic
A:Recession: PQ0865; MUID:94103786; PMID:8277286
A:Recession: PQ0865
A:Recession: RNA
A:Residues: 86-191 cCHA>
C:Genetics:
A:Recent RNA
A:Residues: 86-191 cCHA>
C:Genetics:
A:Recent RNA
A:Residues: 86-191 cCHA>
C:Superfamily: parainfluenza virus cell fusion; transmembrane protein
                                                                                                                    Colliusion glycoprotein precursor - subacute sclerosing panencephalitis virus (strain x N. Contains: fusion glycoprotein F1; fusion glycoprotein F2 C. Species: subacute sclerosing panencephalitis virus, SSPEV C. Date: 31-Dec-1993 #sequence_revision 31-Dec-1993 #text_change 16-Jun-2000 C. Accession: JU0274 R. Komase, K.; Haga, T.; Yoshikawa, Y.; Sato, T.A.; Yamanouchi, K. Virus Genes 4, 173-181, 1990 Structural protein genes of the Yamagata-1 strain of defe A. Reference number: JU0274 M. MUD: 90385702; PMID:1698327 A. Accession: JU0274 A. Accession: 
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Pred. No. 0.047;
0; Mismatches C
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100.0%; Pre
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100.0%; Pre
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Conservative
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Matches 15; Conserv
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es 15; Conserv
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Gaps

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Length 550

predicted

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cell fusion glycoprotein precursor - measles virus
C;Species: measles virus
C;Species: measles virus
C;Dater 131-Mar-1988 #text_change 16-Jun-2000
C;Accession: A25616; PQ0380; PQ0384
R;Buckland, R.; Gerald, C.; Barker, R.; Wild, T.F.
J. Gen. Virol. 68, 1655-1703, 1987
A;Title: Fusion glycoprotein of measles virus: nucleotide sequence of the gene and co A;Reference number: A92794; MUID:87224816; PMID:3585281
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A; Wolecule type: mRNA
A; Residues: 1-553 <BUC>
A; Residues: 1-553 <BUC>
A; Cross-references: GB: D00090; NID: 9222061; PIDN: BAA00056.1; PID: 9222062
A; Experimental source: strain Halle
R; Richardson, C.; Hull, D.; Greer, P.; Hasel, K.; Berkovich, A.; Englund, G.; Bellini
Virology 155, S08-523, 1986
A; Title: The nucleotide sequence of the mRNA encoding the fusion protein of measles v
A; Reference number: A94350; MUID: 87071668; PMID: 3788062
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  A; Accession: A25616
A; Molecule type: mRNA
A; Residues: 4-553 < RICA
A; Residues: 4-553 < RICA
A; Experimental source: strain Edmonston
A; Fittle: A measles virus isolate from a child with Kawasaki disease: sequence compari
A; Reference number: PQ0374; MUID:92300360; PMID:1607874
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 C; Superfamily: parainfluenza virus cell fusion protein
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RESULT 5

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GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
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OM protein - protein search, using sw model

September 24, 2003, 17:30:06; Search time 11.9612 Seconds
(without alignments)
273.361 Million cell updates/sec Run on:

US-09-848-834A-13 174

Title: Perfect score:

1 XHWSYGLRPGSSGPSLKLLSEIKGVIVHRLEGVE 34 Sequence:

BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

283308 seqs, 96168682 residues Searched:

283308 Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

PIR_76:* Database :

pirl:* pir2:* pir3:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

Match Length 4.1.4.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.2.
L - 1111111100777777799848888877111

Rischulz, T.E.; Hoad, J.G.; Whitby, D.; Tizard, E.J.; Dillon, M.J.; Weiss, R.A.
J. Gen. Virol. 73, 1581-1586, 1992
A.Titler. A measles virus isolate from a child with Kawasaki disease: sequence compa_i
A.Reference number: PQ0374; MUID:92300360; PMID:1607874
A.Rocession: PQ0388
A.Wolecule type: genomic RNA
A.Residues: 1-282 <SCH>
C.Genetics:
A.Residues: F
C.Superfamily: parainfluenza virus cell fusion protein
C.Keywords: 91ycoprotein; membrane fusion

cell fusion glycoprotein - measles virus (strain Schwarz vaccine) (fragment) C;Species: measles virus C;Date: 17-Apr-1993 #sequence_revision 17-Apr-1993 #text_change 24-Nov-1999 C;Accession: PQ0388

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RESULT 2

19 LSEIKGVIVHRLEGV 33

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Gaps

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Length 282;

Query Match 41.4%; Score 72; DB 2; Length 282 Best Local Similarity 100.0%; Pred. No. 0.022; Matches 15; Conservative 0; Mismatches 0; Indels

19 LSEIKGVIVHRLEGV 33

20 LSEIKGVIVHRLEGV 34

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PPBO phosphatidylcholin hypothetical prote protocatechuate 3, 149713 panino acid oxida protocatechuate 3, 149908 protocatechuate 3, 149908 protocatechuate 3, 149908 protected prote probable pra prote protein protei	MENTS (Strain TT) (fragmant-1993 #text_chizard, E.J.; Dillchild with Kawasaki; PMID:1607874	Score 72; DB 2; Length 282; Pred. No. 0.022;
	sles revi: 11by 1992 te fi ID:93	
213 75 75 75 75 75 75 75 75 75 75 75 75 75	n - means squence_ r.G.; Wh -1586, is isola 374; MU c. RNA	sh 41.4%; Similarity 100.0%;
00000000000000000000000000000000000000	glycoprotein measles virus Apr.1993 #sequ PQ0376 F.; Hoad, J.G G.; 73, 1581- measles virus number: PQ037 PQ0376	nilarity
552 50 50 50 50 50 50 50 50 64 64 64 64	July 1 1 fusion glycoprotein - measles pecies: measles virus and seles virus becies: 17-Apr-1993 #sequence_revicession: PQ0376 chulz, T.F.; Hoad, J.G.; Whitby Gen. Virol. 73, 1581-1586, 1992 (itle: A measles virus isolate feference number: PQ0374; MUID: 9 (ccession: PQ0376 genomic RNA lesidues: 1-282 <sch> Superfamily: parainfluenza virus isoprane isoprane is penetics: cywords: glycoprotein; membrane</sch>	Query Match Best Local Similarity
0 6 6 6 6 7 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	RESULT 1 P00376 cell fusion glycoprotein - measles virus cell fusion glycoprotein - measles virus C; Species: measles virus C; Species: measles virus C; Accession: P00376 J; Gen. Virol. 73, 1581-1586, 1992 A; Title: A measles virus isolate from a c A; Reference number: P00374; MUID:92300360 A; Mccession: P00376 A; Mesidues: 1-282 <sch> C; Genetics: A; Gene: F C; Superfamily: parainfluenza virus cell f C; Superfamily: membrane fusion</sch>	Query Match Best Local

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1;
                                                                                                                                                        01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-NOV-1995 (Rel. 32, Last sequence update)
28-FEB-2003 (Rel. 32, Last annotation update)
Gonadoliberin I precursor (Gonadotropin-releasing hormone I) (LH-RI) (Luliberin I).
Kenopus laevis (African clawed frog).
Eukaryota; Metacoa; Chordata; Craniata; Vertebrata; Euteleostomi; Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
NCBI_TaxID=8355;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -----LSEIKGVIVHRLEG 32
                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GONADOTROPIN-RELEASING HORMONE ASSOCIATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus; Signal; Pyrrolidone carboxylic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GNRH-ASSOCIATED PEPTIDE I (GAP).
PYRROLIDONE CARBOXYLIC ACID.
AMIDATION (G-34 PROVIDE AMIDE GROUP).
6F4F36FBAE0D4284 CRC64;
                                     7;
                                                                                                                                                                                                                                                                                               TISSUE-Forebrain;
MEDLINE-94185563; PubMed-8137750;
Hayes W.P., Wary S., Battey J.F.;
The frog gonadotropin-releasing hormone-I (GRRH-I) gene has a mammalian-like expression pattern and conserved domains in metamorphosis.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                28;
     Score 62; DB 1; Length 89;
Pred. No. 0.057;
7; Mismatches 9; Indels
                                                                                                                                                                                                                                                                                                                                                                              PROGONADOLIBERIN I.
                                                                                                                                        89 AA
                                                2 HWSYGLRPGSSGPSLKLLSEIKGVIVHR 29
                                                                  GONADOLIBERIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          7; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             2 HWSYGLRPGSSGPSLKL------
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PIR; I51423; I51423
InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
Pfam; PF00446; GnRH; I.
                                                                                                                                        PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      85
24 E
33 E
10246 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; L28040; AAA49728.1; -.
Ouery Match 35.9%
Best Local Similarity 50.0%
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  35.6%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Ouery Match
Best Local Similarity 25.4°,
....hes 15; Conservative
                                                                                                                                      STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        33
89
                                                                                                                                                                                                                                                                                    SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         89 AA;
                                                                                                                                                     01-NOV-1995 (
01-NOV-1995 (
                                                                                                                                 GON1_XENLA
P45656;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MOD_RES
SEQUENCE
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PEPTIDE
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                                                                                                          RESULT 15
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Search completed: September 24, 2003, 17:41:19 Job time: 7.41025 secs

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Glycoprotein; Fusion protein; Transmembrane; Envelope protein; Signal. SIGNAL 1 26 BY SIMILARITY. CHAIN 27 529 FUSION GLYCOPROTEIN F0.
PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus;
Placenta; Pharmaceutical; Signal; Polymorphism;
                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                  GONADOLIBERIN I.
GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        -1- SUBUNIT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2 LINKED BY A DISULFIDE BOND.
-1- SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN
                                                                                                                                                                            PYRROLIDONE CARBOXYLIC ACID.
AMIDATION (G-34 PROVIDE AMIDE GROUP).
W -> S (IN dbSNP:6185).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ģ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Measles virus (strain IP-3-Ca) (Subacute sclerose panencephalitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fusion glycoprotein precursor [Contains: Fusion glycoprotein F2; Fusion glycoprotein F1].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-92263801; PubMed-1585658;
Schmid A., Spielhofer P., Cattaneo R., Baczko K., Ter Meulen V.,
Billeter M.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Subacute sclerosing panencephalitis is typically characterized alterations in the fusion protein cytoplasmic domain of the persisting measles virus.";
Virology 188:910-915(1992).
-!- FUNCTION: THIS PROTEIN DIRECTS FUSION OF VIRAL AND CELLULAR
                                                                                                                                                                                                                                                                                                              ;
                                                                                                                                                                                                                                                                       Score 64; DB 1; Length 92;
Pred. No. 0.031;
5; Mismatches 10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Viruses; ssRNA negative-strand viruses; Mononegavirales;
                                                                                                                                                                                                                                             30A72221B076FA79 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 BY SIMILARITY.
FUSION GLYCOPROTEIN FO.
                                                                                                   PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Paramyxovirinae; Morbillivirus
                                                                                                                                                                                                                                                                                                                                                                                                                                                    VGLF_MEASI STANDARD; PRT; 529 AA. P26031; 083298; 01-MAY-1992 (Rel. 22, Created) 10-MAY-1992 (Rel. 22, Last sequence update) 16-OCT-2001 (Rel. 40, Last annotation update)
                                                                                                                                                                                                                                /FTId=VAR_013943
                                                                                                                                                                                                                                                                                                            5; Mismatches
                                                                                                                                                                                                                                                                                                                                                              25 HWSYGLRPGGKRDAENLIDSFQEIV 49
                                                                                                                                                                                                                                                                                                                                            2 HWSYGLRPGSSGPSLKLLSEIKGVI 26
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 EMBL; X16566; CAA34567.1; -.
EMBL; X16566; CAA34568.1; ALT_INIT.
HSSP, P04849; 1SVF.
InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
                                                                                                                                                                                                                                               10380 MW;
                                                                                                                                                                                                                                                                            36.8%;
                                                   Placenta; Pharmaceutical; Si
Pyrrolidone carboxylic acid.
SIGNAL 1 23
                                                                                                                                                                                                                                                                            Query Match 36.8
Best Local Similarity 40.0
Matches 10; Conservative
                                                                                    23
33
26
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16
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                                                                                                                                                                                                                                               92 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Paramyxoviridae;
NCBI_TaxID=11237;
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24
37
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FAMILY
                                                                                                                                                                                                                                           SEQUENCE
                                                                                                                                                ACT_SITE
                                                                                                               PEPTIDE
PEPTIDE
                                                                                                                                                                            MOD_RES
MOD_RES
VARIANT
                                                                                                   CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                       VGLF_MEASI
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                                                                                                                                                                                                  ö

    1. 36, Last sequence update)
    1. 41, Last annotation update)
    precursor (Gonadotropin-releasing hormone I) (GnRH-I)

                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus;
Signal; Multigene family; Pyrrolidone carboxylic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pagrus major (Red sea bream) (Chrysophrys major).
Bukaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Actinopterygii; Neopterygii; Teleostei; Buteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidel;
                                                                                                                                                                                                     Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Okuzawa K., Granneman J., Bogerd J., Goos H., Zohar Y., Kagawa H.;
Submitted (SEP-1996) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GONADOLIBERIN I.
GNRH-ASSOCIATED PEPTIDE I (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SIMILARITY).
AMIDDATION (G.34 PROVIDE AMIDE GROUP)
(BY SIMILARITY)
(BF 59C990328D73E CRC64;
                                                                                  LINKAGE BETWEEN F2 & F1 (POTENTIAL).
                                                                                              N-LINKED (GLCNAC. . .) (POTENTIAL)
N-LINKED (GLCNAC. . .) (POTENTIAL)
N-LINKED (GLCNAC. . .) (POTENTIAL)
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                                                                                                                                                                     Score 64; DB 1; Length 529;
Pred. No. 0.21;
                                                                                                                                                                                                  1; Indels
                                        EXTRACELLULAR (POTENTIAL).
                                                                                                                                           AE987BC9F07E9AA9 CRC64;
                                                                     CYTOPLASMIC (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   POTENTIAL.
PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                  95 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -!- SUBCELLULAR LOCATION: Secreted.
-!- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                   Mismatches
 PROTEIN F2
                                                       POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Interpro; IPR002012; GnRH.
Interpro; IPR004079; GonadoliberinI.
Pfam; PF00446; GnRH; 1.
                                                                                                                                                                                                     ;
0
                                                                                                                                                                                                                                                                                                                                                           15-JUL-1998 (Rel. 36, Created)
15-JUL-1998 (Rel. 36, Last seq
28-FEB-2003 (Rel. 41, Last anno
                                                                                                                                           57331 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    10566 MW;
                                                                                                                                                                                                                                               36.8%;
                                                                                                                                                                                    93.38;
                                                                                                                                                                                                                              19 LSEIKGVIVHRLEGV 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; D86582; BAA13129.1;
                                                                                                                                                                       Query Match
Best Local Similarity 93.3
Matches 14; Conservative
                                                                                                                                                                                                                                                                                                                                   STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                 (LH-RH I) (Luliberin I).
                                                                                                                                           529 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            sparidae; Pagrus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     95 AA;
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1116
1116
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24
24
24
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TISSUE-Brain;
                                                                                                                                                                                                                                                                                                                                  GON1_PAGMA
P70074;
CHAIN
CHAIN
TRANSMEM
                                                         TRANSMEM
                                                                                 DISULFID
                                                                                                 CARBOHYD
                                                                                                                CARBOHYD
                                                                                                                              CARBOHYD
                                                                                                                                           SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ;
0
                                                                   Neuroendocrinology 60:346-359(1994).
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS00473; GRRH; L.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus;
Signal; Pyrrolidone carboxylic acid.
NON_TER 1 1
SIGNAL <1 5 BY SIMILABITAV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AMIDATION (G-16 PROVIDE AMIDE GROUP) (BY
              Ma Y.J., Costa M.E., Ojeda S.R., "Developmental expression of the genes encoding transforming growth factor alpha and its receptor in the hypothalamus of female rhesus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MEDLINE-89366682; PubMed=2671939;
Hayflick J.S., Adelman J.P., Seeburg P.H.;
"The complete nucleotide sequence of the human gonadotropin-releasing
                                                                                                                                                                                                                                                                                                                                                                                                                                             PROGONADOLIBERIN I.
GONADOLIBERIN I.
GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              21-JUL-1986 (Rel. 01, Created)
01-APR-1988 (Rel. 07, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Lutelinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GRRH I) (Luliberin I) (Gonadorelin); GRRH-associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
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PYRROLIDONE CARBOXYLIC ACID (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 64; DB 1; Length 67; Pred. No. 0.022;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             10; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    505394DAA261A3F2 CRC64;
                                                                                                                          SUBCELLULAR LOCATION: Secreted.
SIMILARITY: Belongs to the GNRH family.
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                                                                                                                                                                                                                                                                                  EMBL; S75918; AAB33096.1; -.
PIR; I78541; I78541.
InterPro; IPR002012; GnRH.
InterPro; IPR004079; Gonadoliberini.
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PRINTS; PR01541; GONADOLIBRNI.
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7573 MW;
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Les 10; Conserv
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P01148;
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                                                                         Adelman J.P., Mason A.J., Hayflick J.S., Seeburg P.H.; "Isolation of the gene and hypothalamic cDNA for the common precursor of gonadotropin releasing hormone and prolactin release-inhibiting
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            "Characterization of single-nucleotide polymorphisms in coding regions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             MAR. Genet. 23:373-373(1999).
ARL. GENET. 23:373-373(1999).
THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATES
                                                                                                                                                                 SEQUENCE FROM N.A., AND VARIANT SER-16.
MEDLINE-88012739; PubMed-6090951;
Seeburg P.H., Adelman J.P.;
"Characterization of CDNA for precursor of human luteinizing hormone releasing hormone.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ERRATUM.

Cargill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N.,
Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L.,
Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.O.,
Lander E.S., 373-373/1999,
                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE-99318093: PubMed=10391209;
Cargill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N.,
Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L.
Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.Q.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PHARMACEUTICAL: Available under the names Factrel (Ayerst Labs), Lutrepulse or Lutrelef (Ferring Pharmaceuticals) and Relisorm
                                                                                                                                                                                                                                                                        SEQUENCE OF 24-33.

MEDLINE-83126573; PubMed=6760865;
Tan L., Rousseau P.;
"The chemical identity of the immunoreactive LHRH-like peptide biosynthesized in the human placenta.";
Biochem. Biophys. Res. Commun. 109:1061-1071(1982).
                                                                                                                                    Proc. Natl. Acad. Sci. U.S.A. 83:179-183(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (Serono).
SIMILARITY: Belongs to the GNRH family.
hormone gene.";
Nucleic Acids Res. 17:6403-6403(1989).
                                            SEQUENCE FROM N.A.
MEDLINE=86094338; PubMed=2867548;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SUBCELLULAR LOCATION: Secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             of human genes.";
Nat. Genet. 22:231-238(1999).
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EMBL; M12578; AAA35916.1; -.
EMBL; X<u>1</u>5215; CAA33285.1; -.
                                                                                                                                                                                                                               releasing hormone.";
Nature 311:666-668(1984).
                                                                                                                       in human and rat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Genew; HGNC:4419; GNRH1.
MIM; 152760; -
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Pfam; PF00446; GnRH; 1.
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GON1_MACMU
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                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation. The European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modifited and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                           EMBL; M21514; AAA47400.1; -.
PIR; A31051; VGRZRK.
HSSP; P04649; ISVF.
InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
Glycoprotein; Fusion protein; Transmembrane; Envelope protein; Signal.
SIGNAL
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MEDLINE-92398437; PubMed=1524494;
Curran M.D., Lu Y.J., Rima B.K.;
"The fusion protein gene of phocine distemper virus: nucleotide and deduced amino acid sequences and a comparison of morbillivirus fusion
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
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ARG/LYS-RICH (BASIC).
LINKAGE BETWEEN F2 & F1 (POTENTIAL).
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N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
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01-DEC-1992 (Rel. 24, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Fusion 91ycoprotein precursor [Contains: Fusion 91ycoprotein F2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "The nucleotide sequence and deduced amino acid composition of haemagglutinin and fusion proteins of the morbillivirus phocid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 65; DB 1; Length 546;
Pred. No. 0.15;
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Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11240;
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F2 PROTEIN.
F1 PROTEIN.
ARG-RICH (BASIC).
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MEDLINE-92113538; PubMed-1765768;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Arch, Virol. 126:159-169(1992).
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86.78;
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Best Local Similarity 86.7
Matches 13; Conservative
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VGLF_PHODV
ID VGLF_PHODV
AC P28886;
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TRANSMEM
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Glycoprotein; Fusion protein; Transmembrane; Envelope protein; Signal. SIGNAL
                                                                                              Curran M.D., Loan D.O., Rima B.K., Kennedy S.; "Nucleotide sequence analysis of phocine distemper virus reveals its distinctness from canine distemper virus."; Vet. Rec. 127:430-431(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                             -1- SUBUNIT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2
                                                                                                                                                                                                                                                                  LINKED BY A DISULFIDE BOND. SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         01-0CT-1996 (Rel. 34, Created)
01-0CT-1996 (Rel. 34, Last sequence update)
01-0CT-1903 (Rel. 41, Last annotation update)
Progonadoliberin | Precursor [Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing
hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I]
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Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        LINKAGE BETWEEN F2 & F1 (POTENTIAL).
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N-LINKED (GLCNAC. . .) (POTENTIAL)

N-LINKED (GLCNAC. . .) (POTENTIAL)

N-LINKED (GLCNAC. . .) (POTENTIAL)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         4; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              -> V (IN REF. 2).
D1FC87CDD426E9B8 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                FUSION GLYCOPROTEIN FO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pred. No. 0.18;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             67 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            POTENTIAL. POTENTIAL.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       F2 PROTEIN.
F1 PROTEIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
[3]
S13
S18ALN-Ulster/88;
MEDLINE-91089508; Pubmed=2264246;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PIR; A48346, A48346.
PIR; JQ1368; VGNZPD.
RSSP. P04849, ISVF.
INTERPO; IPR0007776; Fusion_gly.
Pfam; PF00523; fusion_gly: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GNRHÍ OR GNRH OR LHRH.
Macaca mulatta (Rhesus macaque).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       15 SLKLLSEIKGVIVHRLEGV 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     68873 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; D10371; BAA01206.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        37.48;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               68.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Cercopithecinae; Macaca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               106
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TISSUE=Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        631 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sest Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           [1]
SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             NCBI_TaxID=9544;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              194
149
189
194
110
1148
63
                                                                                                                                                                                                                         MEMBRANES.
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SEQUENCE OF 26-35.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Local Similarity
es 15; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 95 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NCBI_TaxID=11242;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       26
26
35
35
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                     releasing
                                     Mol. Mar.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       VGLF_RINDK
P12574;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PEPTIDE
MOD_RES
MOD_RES
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PEPTIDE
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VGLF_RINDK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Best Loc
Matches
                 δ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           g
                                                                                                                                                 This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the Buropean Bioinformatics Institute. There are no restrictions on its way non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           ;;
                                                                                                                                                                                                                                                                                                                                                                                            InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
Glycoprotein; Fusion protein; Transmembrane; Envelope protein; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-0CT-1996 (Rel. 34, Created)
01-0CT-1996 (Rel. 34, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Gondoliberin I precursor (Gonadotropin-releasing hormone I) (GRRH-I)
                                                      THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                          LINKED BY A DISULFIDE BOND.
SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Actinopterygii; Neopterygii; Teleostei; Euteleostei; Neoteleostei;
Acanthomorpha; Acanthopterygii; Percomorpha; Perciformes; Percoidei;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  LINKAGE BETWEEN F2 & F1 (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
R -> K (IN REF. 2).
D -> N (IN REF. 2).
N -> S (IN REF. 2).
 ine 11:438-444(1993).
FUNCTION: THIS PROFEIN DIRECTS FUSION OF VIRAL AND CELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Sothilf Y., Elizur A., Chow M., Chen T.T., Zohar Y.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ;
0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 66; DB 1; Length 662;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    -> H (IN REF. 2).
FB2C81C9797805F0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FUSION GLYCOPROTEIN FO.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        A -> K (IN REF. 2).

-> N (IN REF. 2).

N -> S (IN REF. 2).

I -> M (IN REF. 2).

A -> V (IN REF. 2).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. 0.14;
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A -> V (IN R
L -> H (IN R
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROTEIN F2.
PROTEIN F1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      POTENTIAL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Sparus aurata (Gilthead sea bream).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TISSUE=Brain;
MEDLINE=95268499; PubMed=7749463;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    (LH-RH I) (Luliberin I) (SBGnRH).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SLKLLSEIKGVIVHRLEGV 33
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        72970 MW;
                                                                                                                                                                                                                                                                                                  EMBL; M21849; AAA42878.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           37.98;
73.78;
                                                                                                                                                                                                                                                                                                                    EMBL; X65509; CAA46481.1; -PIR; JS0321; VGNZCD.
PIR; S21382; S21382.
HSSP; P04849; 1SVF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      662
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      662 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            225
606
180
62
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sparus.
                                     MEMBRANES.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NCBI_TaxID=8175;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local S.
14;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GON1_SPAAU
P51919;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CHAIN
TRANSMEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CARBOHYD
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CARBOHYD
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    CONFLICT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  DISULFID
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CONFLICT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CONFLICT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                       CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         RESULT 8
GON1_SPAAU
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             fatches
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SOLUTION TO THE STATE OF THE SOLUTION OF THE STATE OF THE SOLUTION OF THE SOLU
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Pfam; PF00446; GnRH; 1.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus; Signal; Multigene family; Pyrrolidone carboxylic acid.
1 25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GNRH-ASSOCIATED PEPTIDE I (POTENTIAL).
                                                                                                                Powell J.F.P., Zohar Y., Elizur A., Park M., Fischer W.H., Craig A.G., Rivler J.E., Lovejoy D.A., Sherwood N.M.; "Three forms of gonadotropin-releasing hormone characterized from brains of one species.", U.S.A. 91:12081-12085(1994).

-!- FUNCTION: Stimulates the secretion of gonadotropins.
-!- SUBCELULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      -1- SUBDNIT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2 LINKED BY A DISULFIDE BOND.
-1- SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PYRROLIDONE CARBOXYLIC ACID.
AMIDATION (G-36 PROVIDE AMIDE GROUP).
hormone from the gilthead seabream (Sparus aurata)."; Biol. Biotechnol. 4:27-35(1995).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-0cT-1989 (Rel. 12, Created)
01-0cT-1989 (Rel. 12, Last sequence update)
16-0cT-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein precursor [Contains: Fusion glycoprotein F2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ï
                                                                                                                                                                                                                                                      -!- MASS SPECTROMETRY: MW-1113.6; METHOD-MALDI; RANGE-26-35.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 95;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    14; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         49313FD6FD6B87DA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0.019;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      2 HWSYGLRPGSSGPSLKLLSEIKGVIVHRLEGVE 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27 HWSYGLSPGGK-RDLDSLSDTLGNIERFPHVD 58
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               546 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              GONADOLIBERIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 65.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Rinderpest virus (strain Kabete O) (RDV).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No.
                                                                                             MEDLINE=95083645; PubMed=7991588;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    25
95
35
95
26
10753 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                           EMBL; U30320; AAA75469.1; -.
InterPro; IPR002012; GnRH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          37.68;
45.58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Fusion glycoprotein F1].
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DOMAIN
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CHAIN
CHAIN
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Matches
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           Dp
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                                                                                                                                                                                                                                                                              This SWISS-PROT entry is copyright. It is produced through a collaboration between the SWASS Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; 230700; CAA83186.1; -.
EMBL; 230697; CAA83181.1; -.
PIR; 247305; S47305.
HSSP; P04849; ISVF.
InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
Glycoprotein; Fusion protein; Transmembrane; Envelope protein; Signal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gaps
                                                                                                                                                                      SUBDIVIT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2 LINKED BY A DISULFIDE BOND.
SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN
SEQUENCE FROM N.A.
MEDLINE=95088609; PubMed=7996154;
MEDLINE=95088609; DubMed=7996154;
Warns S.A., Barron M.D., Chamberlain R.W., Goatley L., Barrett T.;
"Nucleotide sequence comparisons of the fusion protein gene from virulent and attenuated strains of rinderpest virus.";
J. Gen. Virol. 75:3611-3617(1994).
-I- FUNCTION: THIS PROTEIN DIRECTS FUSION OF VIRAL AND CELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ARG/LYS-RICH (BASIC).
LINKAGE BETWEEN F2 & F1 (POTENTIAL).
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N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
N-LINKED (GLCNAC. ..) (POTENTIAL).
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TSUITIAMA K., YOSHIKAWA Y., Yamanouchi K.;
"Fusion glycoprotein (F) of rinderpest virus: entire nucleotide
sequence of the F mRNA, and several features of the F protein.";
Virology 164:523-530(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fusion glycoprotein precursor [Contains: Fusion glycoprotein F2; Fusion glycoprotein F1].
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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01-JUL-1989 (Rel. 11, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
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F2 PROTEIN.
F1 PROTEIN.
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Pred. No. (
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546 AA;
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Best Local Similarity
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SIGNAL
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P10864;
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PIR; A28921; VGNZRL.
HSSP; P04849; LSVF.
InterPro; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
Glycoprotein; Fusion protein; Transmembrane; Envelope protein; Signal.
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MEDLINE=88129050; PubMed=3433924;
MEDLINE=88129050; PubMed=3433924;
MEDLINE=88129050; PubMed=3433924;
Marcett T., Clarke D.K., Evans S.A., Rima B.K.;
"The nucleotide sequence of the gene encoding the F protein of canine distemper virus; a comparison of the deduced amino acid sequence with
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                                   THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2
                                                                           -!- SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN
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ARG/LYS-RICH (BASIC).

LINKAGE BETWEEN F2 & F1 (POTENTIAL).

N-LINKED (GLCNAC. .) (POTENTIAL).

N-LINKED (GLCNAC. .) (POTENTIAL).

N-LINKED (GLCNAC. .) (POTENTIAL).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             VGLE_CDVO STANDARD; PRT; 662 AA.
P12569; 065991;
01-0CT-1989 (Rel. 12, Created)
01-0CT-1989 (Rel. 12, Last sequence update)
16-0CT-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein precursor [Contains: Fusion glycoprotein F2;
FUNCTION: THIS PROTEIN DIRECTS FUSION OF VIRAL AND CELLULAR
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Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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                                     -!- SUBUNIT: THE MATURE FORM LINKED BY A DISULFIDE BOND.
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Res. 8:373-386(1987).
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                                                                                                                             Measles virus (strain Leningrad-16) (Subacute sclerose panencephalitis
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Measles virus (strain Philadelphia-26) (Subacute sclerose
panencephalitis virus), and
Measles virus (strain Edmonston B) (Subacute sclerose panencephalitis
                                                                                                                                                                                                                                                                                                               Richardson C.D., Hull D., Greer P., Hasel K., Berkovich A., Englund G., Bellini W.J., Rima B., Lazzarini R.A.; "The nuclectide sequence of the mRNA encoding the fusion protein of measles virus (Edmonston strain): a comparison of fusion proteins from several different paramyxoviruses.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Cattaneo R., Schmid A., Spielhofer P., Kaelin K., Baczko K., Meulen V., Pardowitz J., Flanagan S., Rima B.K., Udem S.A.; "Mutated and hypermutated genes of persistent measles viruses which caused lethal human brain diseases.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE-94303181; PubMed-8030232;
Hummel K.B., Vanchiere J.A., Bellini W.J.;
"Restriction of fusion protein mRNA as a mechanism of measles virus
persistence.";
                                                                           Measles virus (strain Edmonston) (Subacute sclerose panencephalitis
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Rota J.S., Wang Z.D., Rota P.A., Bellini W.J.; "Comparison of sequences of the H, F, and N coding genes of measles
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Buckland R., Gerald C., Barker R., Wild T.F.;
Frusion glycoprotein of measles virus: nucleotide sequence of the gene and comparison with other paramyxoviruses.";
J. Gen. Virol. 68:1695-1703(1987).
01-AUG-1988 (Rel. 08, Created)
01-AUG-1988 (Rel. 08, Last sequence update)
16-OCT-2001 (Rel. 40, Last annotation update)
Fusion 91ycoprotein Precursor [Contains: Fusion 91ycoprotein F2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Schmid A., Spielhofer P., Cattaneo R., Baczko K., Ter Meulen V.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Subacute sclerosing panencephalitis is typically characterized alterations in the fusion protein cytoplasmic domain of the persisting measles virus."; virology 188:910-915(1992).
                                                                                                    Measles virus (strain Halle) (Subacute sclerose panencephalitis
                                                                                                                                                      virus (strain Edmonston-Zagreb) (Subacute sclerose
                                                                                                                                                                                                                            Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11235, 11236, 70147, 70149, 70148, 70146;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STRAIN-Edmonston, Leningrad-16, and Edmonston-Zagreb;
MEDLINE-94249283; PubMed-8191786;
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MEDLINE-87071668; PubMed-3788062;
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MEDLINE-90085790; PubMed-2596022;
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Virus Res. 31:317-330(1994).
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                                                                                                                                                              MEMBRANES.
-1- SUBUNIT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2
                                                                                                                                                                                                      LINKED BY A DISULFIDE BOND.
-!- SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN
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LINKAGE BETWEEN F2 & F1 (POTENTIAL).
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N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
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16-0CT-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein precursor (Contains: Fusion glycoprotein F1):
                                                                                                                                        -!- FUNCTION: THIS PROTEIN DIRECTS FUSION OF VIRAL AND CELLULAR
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Pred. No. 0.015;
0; Mismatches 0; Indels
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Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=36409;
                                                                                                              Submitted (OCT-1995) to the EMBL/GenBank/DDBJ databases
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PROTEIN F1.
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EMBL; X05597; CAA29090.1; ALT_INIT.
EMBL; K01711; AAA75498.1; ALT_INIT.
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Pfam; PF00523; fusion_gly; 1.
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01-FEB-1995 (Rel. 31, Last seq
16-OCT-2001 (Rel. 40, Last anno
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              59532 MW;
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Virology 202:665-672(1994).
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Best Local Similarity 100.
Matches 15; Conservative
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                                                               STRAIN-Edmonston B;
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                                            SEQUENCE FROM N.A.
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284 LSEIKGVIVHRLEGV 298

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         EMBL; 231650; cra. 247300; 247300. HSP 247300; 247300; 247300. HSP 18VF: P04849; 15VF. InterPro; IPR000776; Fusion_gly. InterPro; IPR00523; fusion_gly; 1. Pfan; PP00523; fusion_gly; 1. Pfan; Prof. Envelope protein; Signal.
                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                -!- SUBUNIT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LINKED BY A DISULFIDE BOND.
-1- SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=95088609; PubMed=7996154;
Evans S.A., Baron M.D., Chamberlain R.W., Goatley L., Barrett T.;
Nucleotide sequence comparisons of the fusion protein gene from
virulent and attended strains of rinderpest virus.";
J. Gen. Virol. 75:3611-3617(1994).
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LINKAGE BETWEEN F2 & F1 (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
N-LINKED (GLCNAC. .) (POTENTIAL).
                                                                                                                                                                                                                                                                                                               Fusion glycoprotein precursor [Contains: Fusion glycoprotein F2; Fusion glycoprotein F1].
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                 Length 534;
                                                                                                                                                                                                                                                                                                                                                                 Rinderpest virus (strain RBT1) (RDV).
Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
                                                    0; Indels
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F1 PROTEIN.
ARG/LYS-RICH (BASIC).
POTENTIAL.
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             DB 1;
0.015;
                                                                                                                                                                                                                                                  01-FEB-1995 (Rel. 31, Created)
01-FEB-1995 (Rel. 31, Last sequence update)
16-0CT-2001 (Rel. 40, Last annotation update)
             Score 72; DB Pred. No. 0.03
                                                                                                                                                                                                                       546 AA
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41.4%; Scor
100.0%; Pre
0;
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                                                                                                            19 LSEIKGVIVHRLEGV 33
             Query Match
Best Local Similarity 100.
Matches 15; Conservative
                                                                                                                                                                                                                     STANDARD;
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P41360;
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                                                                                                                                                                                                                                                                                                                                               MEDLINE=93227570; PubMed=8470368; Makino S.; Mori T., Sasaki K., Hashimoto H., Makino S.; Moroular cloning and complete nucleotide sequence of genomic RNA of the AIK-C strain of attenuated measles virus."; Virus Genes 7:67-81(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Glycoprotein; Fusion protein; Transmembrane; Envelope protein; Signal. SIGNAL 1 23
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-!- SIMILARITY: BELONGS TO THE PARAMXXOVIRUSES FUSION GLYCOPROTEIN
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CYDOLASMIC (POTENTIAL).
LINKAGE BETWEEN F2 & F1 (POTENTIAL).
N-LINKED (GLCNAC. . ) (POTENTIAL).
N-LINKED (GLCNAC. . ) (POTENTIAL).
N-LINKED (GLCNAC. . ) (POTENTIAL).
AACADAB92DE0D938 CRC64;
                                    01-JUN-1994 (Rel. 29, Created)
01-JUN-1994 (Rel. 29, Last sequence update)
116-OCT-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein precursor [Contains: Fusion glycoprotein.F2;
                                                                                                                                                                                  Measles virus (strain AIK-C) (Subacute sclerose panencephalitis
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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Pred. No. 0.015;
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PROTEIN F1.
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InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
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Matches 15; Conservative
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ID VGLF_MEASE
AC P08300;
VGLF_MEASA
P35973;
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Compugen Ltd.
GenCore version 5.1.6
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OM protein - protein search, using sw model

September 24, 2003, 17:00:31; Search time 6.31025 Seconds (without alignments) 253.383 Million cell updates/sec ou:

US-09-848-834A-13 174 1 XHWSYGLRPGSSGPSLKLLSEIKGVIVHRLEGVE

Perfect score: ritle:

Sequence:

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BLOSUM62 Gapop 10.0 , Gapext 0.5 Scoring table:

127863 seqs, 47026705 residues Searched:

Total number of hits satisfying chosen parameters:

Minimum DB seq length: 0 Maximum DB seq length: 2000000000

Listing first 45 summaries Post-processing: Minimum Match 08 Maximum Match 1008

SwissProt_41:* Database :

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

	Description		P41360 rinderpest			P41356 rinderpest			P51919 sparus aura			P55247 macaca mula	P01148 homo sapien	_	P70074 pagrus majo	xenopu		Q95335 tupaia glis	_	P13562 mus musculu	P49921 sus scrofa	P07490 rattus norv	Q9ia10 dicentrarch		P51918 haplochromi			P37041 alligator m	720	P55246 oncorhynchu	Q9iau2 rana dybows	577	, 053426 mycobacteri	P80559 anabaena sp
SUMMARIES	DI	VGLF_MEASY	VGLF_RINDB	VGLF_MEASA	VGLF_MEASE	VGLF_RINDR	VGLF_RINDL	VGLF_CDVO	GON1_SPAAU	VGLF_RINDK	VGLF_PHODV	GON1_MACMU	GON1_HUMAN	VGLF_MEASI	- 1	GON1_XENLA	- 1	GON1_TUPGB	GON1_MESAU	GON1_MOUSE	GON1_PIG	GON1_RAT	GON1_DICLA	GON1_MORSA	GON1_HAPBU	GON1_CHICK	PRA_MYCLE	GON1_ALLMI	PPCT_BOVIN	GON3_ONCMY	GON8_RANDY	FEZ1_RAT	PRA_MYCTU	APCE_ANASP
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Q9qy06 mus musculu P08373 escherichia	054713 cavia porce Q9y6i4 homo sapien	P49445 rattus norv Q91w36 mus musculu	P33439 clarias gar P03185 epstein-bar	P35236 homo sapien O76942 encephalito	Q92097 oncorhynchu P35629 salmo salar
MY9B_MOUSE MURB_ECOLI	GON1_CAVPO UBP3_HUMAN	PTN7_RAT UBP3_MOUSE	GON1_CLAGA	PTN7_HUMAN PTP_ENCCU	GON3_ONCTS
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28.7	28.2 28.2	27.9	27.6	27.6	27.3 27.3
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34 35	36	38 36 8	40	43	44

ALIGNMENTS

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              . protein; Transmembrane; Envelope protein; Signal.
                                                                                                                                             Measles virus (strain Yamagata-1) (Subacute sclerose panencephalitis
                                                                                                                                                                                                                                                                                                                                                       MEMBRANES.
--!- SUBUNT: THE MATURE FORM IS A DIMER OF POLYPEPTIDES F-1 AND F-2 LINKED BY A DISULFIDE BOND.
--!- SIMILARITY: BELONGS TO THE PARAMYXOVIRUSES FUSION GLYCOPROTEIN FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL.
CYTOPLASMIC (POTENTIAL).
LINRAGE BETWEEN F2 & F1 (POTENTIAL).
N-LINKED (GLCNAC. . .) (POTENTIAL).
W; F5B21757E643844D CRC64;
                                                                                                                                                                                                                                  SEQUENCE FROM N.A.
MEDLINE-90385702; PubMed-1698327;
Komase K., Haga T., Yoshikawa Y., Sato T.A., Yamanouchi K.;
Komase K., Haga T., Yoshikawa Y., Sato T.A., Yamanouchi K.;
"Molecular analysis of structural protein genes of the Yamagata-1
strain of defective subacute sclerosing panencephalitis virus. IV.
Nucleculae sequence of the fusion gene.";
Virus Genes 4:173-181(1990).
                                                     01-MAY-1992 (Rel. 22, Created)
01-MAY-1992 (Rel. 22, Last sequence update)
16-007-2001 (Rel. 40, Last annotation update)
Fusion glycoprotein precursor [Contains: Fusion glycoprotein F2;
                                                                                                                                                              virus).
Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11239;
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                             534 AA
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PROTEIN F1.
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                             PRT;
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Pfam; PF00523; fusion_gly; 1.
Glycoprotein; Fusion protein; Tra
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Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                         Takeda M., Kato A., Kobune F., Sakata H., Li Y., Shioda T., Sakai Y., Asakawa M., Nagai Y., "Mesasles virus attenuation associated with transcriptional impediment and a few amino acid changes in the polymerase and accessory proteins.";
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Ogura H.;
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Pred. No. 0.12;
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Pred. No. 0.12;
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Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBI_TaxID=11234;
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SEQUENCE 550 AA; 59512 MW; 7AA4F1D117197BF9 CRC64;
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Pfam; PF00523; fusion_gly; 1.
SEQUENCE 550 AA; 59559 MW; 609EE024A7E59C54 CRC64;
01-MAY-1999 (TrEMBLrel. 10, Last sequence update) 01-0CT-2001 (TrEMBLrel. 18, Last annotation update)
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01-MAY-2000 (TrEMBLrel. 13, Created)
01-MAY-2000 (TrEMBLrel. 13, Last sequ
01-DEC-2001 (TrEMBLrel. 19, Last anno
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Pro; IPR000776; Fusion_gly.
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EMBL; AB012949; BAA33877.1; -.
EMBL; AB012948; BAA33871.1; -.
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Ogura H.; "Nucleotide sequences of the fusion protein gene of subacute "Nucleotide sequences of the fusion protein acid sequences sclerosing panencephalitis viruses: deduced amino acid sequences showed the cytoplasmic domain highly mutated --truncated, elongated or predicted secondary structure changed."; Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases. EMBL/ AF179437; AAF02702.1;
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11234;
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InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
SEQUENCE 550 Aa; 59315 MW; 086E51FED235EBBA CRC64;
01-WAY-2000 (TrEMBLrel. 13, Created)
01-WAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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EMBL; M81901; AAA46421.1; -.
BRSP; P04849; ISVF.
InterPro; IPR000776; Fusion_gly.
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"Nucleotide sequences of the fusion protein gene of subacute sclerosing panencephalitis viruses: deduced amino acid sequences showed the cytoplasmic domain highly mutated --truncated, elongated or predicted secondary structure changed.";

Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.

EMBL, AF179438; AAF02703.1;
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EMBL; AJ13108: CAB38075.1; -.
InterPro: IPROOPTO; Fusion_gly.
FROW PF00523; fusion_gly: 1.
SEQUENCE 550 AA; 59580 MW; 8255499968B5D862 CRC64;
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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Pfam; PF00523; fusion_gly; 1.
SEQUENCE 550 AA; 59333 MW; 086E51FED5582BBA CRC64;
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MEDLINE=99329215; PubMed=10400788;
Johnston I.C., Ter Meulen V., Schneider-Schaulies J., Schneider-Schaulies S.;
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01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-DEC-2001 (TrEMBLrel. 19, Last annotation update)
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Ol-MAY-2000 (TrEMBLrel. 13, Last sequence update)
Ol-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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"Adaptation of wild-type measles virus to tissue culture.";
J. Virol. 76:1505-1509(2002).
EMBL; AVOS9392; AAL29688.1;
InterPro: IPR000775; FUSIOn_gly.
Pfam; PF00523; fusion_gly; 1.
SEQUENCE 550 AA; 59551 MW; 9A7A4BA99E4DA8E9 CRC64;
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Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11234;
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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SEQUENCE 550 AA; 59564 MW; A78EEC9CD6268E58 CRC64;
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01-MAR-2002 (TrEMBLrel. 20, Last sequence update)
01-JUN-2002 (TrEMBLrel. 21, Last annotation update)
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Ning X., Agra, Morimoto K., Ito N., Shingai M., Kimura M., Ogura H.; Mucleotide sequences of the fusion protein gene of subacute sclerosing panencephalitis viruses: deduced amino acid sequences showed the cytoplasmic domain highly mutated --truncated, elongated or
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Sheng J., Nakanishi M., Watanabe M., Ueda S.;
"An amino acid alteration of F protein responsible for the enhanced
flusogenicity of measles virus.";
Submitted (AUG-1995) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                Score 72; DB 12; Length 550;
Pred. No. 0.12;
0; Mismatches 0; Indels
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                  Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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Viruses; ssRNA negative-strand viruses; Mononegavirales;
Paramyxoviridae; Paramyxovirinae; Morbillivirus.
                                                                                                                                                                               predicted secondary structure changed.";
Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; AF179436; AAF02701.1; -.
HSSP: P04849; 1SVF.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sheng J., Watanabe M., Ueda S.;
"Selection of a neurotropic variant of measles virus.";
Submitted (AUG-1995) to the EMBL/GenBank/DDBJ databases.
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Pfam; PF00523; fusion_gly; 1.
SEQUENCE 550 AA; 59589 MW; 73E7BD457ABA39B7 CRC64;
                                                                                                                                                                                                                                       InterPro; IPR000776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
SEQUENCE 550 AA; 59405 MW; 0AE6DBFC5DD22BBA CRC64;
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Last annotation update)
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100.0%; Pred. No. v...
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HSSP; P04849; 1SVF.
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Best Local Similarity 100.(
Matches 15; Conservative
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                              Paramyxoviridae; I
NCBI_TaxID=11234;
                                                                          SEQUENCE FROM N.A.
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                                                                                                                  sclerosing panencephalitis viruses: deduced amino acid sequences showed the cytoplasmic domain highly mutated --truncated, elongated or predicted secondary structure changed.";
Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.
EMBL; D63956; BAA09558.1; -.
EMBL; AF179431; AAF02696.1; -.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Nuclectide sequences of the fusion protein gene of subacute sclerosing panencephalitis viruses: deduced amino acid sequences showed the cytoplasmic domain highly mutated --truncated, elongated or predicted secondary structure changed."; Submitted (AGC-1999) to the EMBL/GenBank/DDBJ databases. EMBL, AF179432; AAF02697.1; --HSSP; P04849; ISVF
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                                                                          Ning X., Ayata M., Morimoto K., Ito N., Shingai M., Kimura M., Oqura H.;
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                                                                                                     Nucleotide sequences of the fusion protein gene of subacute
                                                                                                                                                                                                                                                                                  DB 12; Length 550; 0.12;
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100.0%; Pred. No. 0.12;
tive 0; Mismatches 0; Indels
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBI_TaxID=11234;
fusogenicity of measles virus.";
Submitted (AUG-1995) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                    INCERPOS IPPRO00776; Fusion_gly.
Pfam; PF00523; fusion_gly; 1.
SEQUENCE 550 AA; 59530 MW; 97C991C7E2169839 CRC64;
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SEQUENCE 550 AA; 59504 MW; 2AA969D37FA5CA17 CRC64;
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01-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-UUN-2001 (TrEMBLrel. 17, Last annotation update)
Fusion protein.
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U-MAY-2000 (TrEMBLrel. 13, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
Fusion protein.
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                                                            STRAIN=NAGAHATA;
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Pred. No. 0.12;
Mismatches
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MEDLINE=21014265; PubMed=11186456;
100.08; v.4
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Matches 15; Conservative
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Submitted (AUG-1999) to the EMBL/GenBank/DDBJ databases.

EMBL; AFI79440; AAF02705.1;
EMBL; AFI79439; AAF02704.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                            "Biased hypermutation and other genetic changes in defective measles viruses in human brain infections.";
Cell 55:255-265(1988).
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MEDLINE-899003063; PubMed-3167982;
Cattaneo R., Schmid A., Eschle D., Baczko K., ter Meulen V.,
Billeter M.A.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 537;
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11234;
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBI_TaxID=11234;
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Cattaneo R., Billeter M.A.;
Virology 0:0-0(4).
EMBL; X16567; CAA34574.1; -.
EMBL; X16567; CAA34575.1; -.
HSSP; PO4849; 1SVF.
InterPro; IPPROO776; Fusion_gly.
Pfam; PPO0523; fusion_gly; 1.
SEQUENCE 537 AA; 58275 MW; DOA6OAC66D979E06 CRC64;
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Pfam; PF00523; fusion_gly; 1.
SEQUENCE 545 AA; 58907 MW; 0234C28AE193E77D CRC64;
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Last sequence update)
Last annotation update)
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Last sequence update)
Last annotation update)
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100.0%; Pred. No. 0.11;
iive 0; Mismatches 0;
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01-NOV-1996 (TrEMBLrel. 01,
01-JUN-2001 (TrEMBLrel. 17,
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Matches 15; Conserv
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Aianot P.K., Sminev A.G., Bezborodova S.V., Starov S.K., Drygin V.V.,
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STRAIN=NAGAHATA;
Sheng J., Nakanishi M., Watanabe M., Ueda S.;
"An amino acid alteration of F protein responsible for the enhanced
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       "Primary structure of the F-gene from Rinderpest virus strain K.";
Mol. Gen. Mikrobiol. Virusol. 4:29-33(2000).
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Pred. No. 0.12;
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11241;
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
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Interpret: IPR000776; Fusion_gly.
Pfam: PF00523; fusion_gly: SEQUENCE 546 AA, 58572 WW; 449B2B2DD7405F0B CRC64;
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Sheng J., Watanabe M., Ueda S.;
"Selection of a neurotropic variant of measles virus.";
Submitted (AUG-1995) to the EMBL/GenBank/DDBJ databases.
                                                           01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-MAR-2002 (TrEMBLrel. 20, Last annotation update)
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01-MAY-1997 (TrEMBLrel. 03, Last sequence update)
01-JUN-2001 (TrEMBLrel. 17, Last annotation update)
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MEDILIPE-89003063; PubMed=3167982;
Cattaneo R., Schmid A., Eschle D., Baczko K., ter Meulen V.,
Billeter M.A.; terseximitation and other genetic changes in defective measles
"Insaed hypermutation and other genetic changes in defective measles
viruses in human brain infections.";
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Pred. No. 0.11;
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Paramyxoviridae; Paramyxovirinae; Morbillivirus.
NCBL_TaxID=11234;
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Cattaneo R., Billeter M.A.;

Virology 0:0-0(0)

EMBL; X16568; CAA34581.1; -.

EMBL; X16568; CAA34582.1; -.

FFAM; PF00523; fusion_gly; 1.

SEQUENCE 534 AA; 57899 MW; 637245E23B5BE044 CRC64;
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Copyright (c) 1993 - 2003 Compugen Ltd.
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1 XHWSYGLRPGSSGPSLKLLSEIKGVIVHRLEGVE
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Search completed: September 24, 2003, 17:00:24 Job time : 12.0668 secs

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; OTHER INFORMATION: Amino Acids 450 to 1315 of SEQ ID NO: US-08-913-880C-12
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Pred. No. 1.3e-08;
1; Mismatches 0;
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CURRENT APPLICATION NUMBER: US/08/913,880C
CURRENT FILING DATE: 1997-11-24
NUMBER OF SEQ ID NOS: 17
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Best Local Similarity 95.5%;
Matches 21; Conservative
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US-08-913-880C-10
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                                      SEQ ID NO 12
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Sequence 14, Application US/08913880C
Patent No. 6372225
GENERAL INPORMATION:
APPLICANT: MATSUDA, MOTINITO
TITLE OF INVENTION: VACCINE
FILE REFERENCE: 216-380P
CURRENT APPLICATION NUMBER: US/08/913,880C
CURRENT APPLICATION NUMBER: US/08/913,880C
CURRENT APPLICATION NUMBER: US/08/913,880C
SEQ ID NO 14
SEQ ID NO 14
SEQ ID NO 14
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Patent No. 637225
GENERAL INFORMATION
GENERAL INFORMATION
TITLE OF INVENTION: TETANUS TOXIN FUNCTIONAL FRAGMENT ANTIGEN AND TETANUS
TITLE OF INVENTION: VACCINE
FILE REFERENCE: 216-380P
CURRENT APPLICATION NUMBER: US/08/913,880C
CURRENT FILING DATE: 1997-11-24
SEQ ID NO 13
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Patent No. 6372225
GENERAL INFORMATION:
APPLICANT: MATSUDA, MOTIHITO
TITLE OF INVENTION: TETANUS TOXIN FUNCTIONAL FRAGMENT ANTIGEN AND TETANUS
FILE REFERENCE: 216-380P
CURRENT APPLICATION NUMBER: US/08/913,880C
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95.5%; Pred. No. 1.3e-08;
w.comatches 0;
                   LENNFTVSFWLRVPKVSASHLE 37
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                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Clostridium tetani
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 95.5 Matches 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-08-913-880C-12
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16
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                                                                                                                                                                                                                                                                                                                                                                                 FEATURE:
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US-08-913-880C-11
; Sequence 11, Application US/08913880C
; Patent No. 6372225
; GENERAL INFORMATION:
; APPLICANT: MATSUDA, Morihiro
; TITLE OF INVENTION: TETANUS TOXIN FUNCTIONAL FRAGMENT ANTIGEN AND TETANUS
; TITLE OF INVENTION: VACCINE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 10, Application US/08913880C
Patent No. 6372225
GENERAL INFORMATION:
APPLICANT: MATSUDA, MOTINICO
TITLE OF INVENTION: TETANUS TOXIN FUNCTIONAL FRACMENT ANTIGEN AND TETANUS
TITLE OF INVENTION: VACCINE
FILE REFERENCE: 216-380P
CURRENT APPLICATION NUMBER: US/08/913,880C
CURRENT ELING DATE: 1997-11-24
NUMBER OF SEQ ID NOS: 17
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                                                                                                                                                                                                                                                                                                                                                                                                                                         Score 114; DB 4; I
Pred. No. 1.4e-08;
1. Mismatches 0;
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Pred. No. 1.4e-08;
1; Mismatches 0;
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US-08-913-880C-16
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                                                                                                                               FEATURE:
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APPLICANT: MATERION, MORINIFO
TILLE OF INVENTION: TETANUS TOXIN FUNCTIONAL FRAGMENT ANTIGEN AND TETANUS
TILLE OF INVENTION: VACCINE
TILLE OF INVENTION: YACCINE
FILE REFERENCE: 216-380P
                       Gaps
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Pred. No. 8.9e-09;
1; Mismatches 0; Indels
                   0; Indels
                                                                                                                                                                             Sequence 5, Application US/08668381A

Patent No. 5780024

GENERAL INFORMATION:
APPLICANT: Brown, Robert H.
APPLICANT: Fishman, Paul S.
APPLICANT: Francis, Jonathan W.
APPLICANT: Hosler, Betsy A.
TITLE OF INVENTION: SUPEROXIDE DISMUTASE/TETANUS TOXIN
TITLE OF INVENTION: FRAGMENT C HYBRID PROTEIN
NUMBER OF SEQUENCES: 6
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MEDIUM TYPE: FLOPN disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/668,381A
FILING DATE: 21-JUN-1996
CLASSIFICATION: 514
PRIOR APPLICATION NUMBER: 00/000,473
FILING APPLICATION NUMBER: 30,164
REGISTRATION NUMBER: 30,164
REGISTRATION NUMBER: 30,164
REGISTRATION NUMBER: 30,164
REGISTRATION NUMBER: 30,164
RESERENCE/DOCKET NUMBER: 00786/269001
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELEFRAX: 617/542-8906
95.5%; Pred. No. 6.1e-09;
tive 1; Mismatches 0
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Patent No. 6372225
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95.5%;
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Best Local Similarity 95.5
Matches 21; Conservative
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TELEX: 200154
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 02110-2804
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      amino acid
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Best Local Similarity
Matches 21; Conserve
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US-08-913-880C-17
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                                                                                                                                                                  US-08-668-381A-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                        STREET:
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Patent No. 6372225
GENERAL INFORMATION:
APPLICANT: MATSUDA, MOTINITO
TITLE OF INVENTION: TETANUS TOXIN FUNCTIONAL FRAGMENT ANTIGEN AND TETANUS
TITLE OF INVENTION: VACCINE
FILE REFERENCE: 216-380P
CURRENT APPLICATION NUMBER: US/08/913,880C
CURRENT APPLICATION NUMBER: U97-11-24
NUMBER OF SEQ ID NOS: 17
SEQ ID NO 16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GENERAL INFORMATION:
APPLICANT: MATSUDA, MOTINITO
TITLE OF INVENTION: TETANUS TOXIN FUNCTIONAL FRAGMENT ANTIGEN AND TETANUS
TITLE OF INVENTION: YACCINE
FILE REFERENCE: 216-380P
CURRENT PELLING NUMBER: US/08/913,880C
CURRENT FILING DATE: 1997-11-24
NUMBER OF SEQ ID NOS: 17
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Pred. No. 1.3e-08;
1; Mismatches 0; Indels
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Pred. No. 1.3e-08;
1; Mismatches 0; Indels
                                                                                                                                                                                                                                  Score 114; DB 4; Length 853;
Pred. No. 1.3e-08;
1; Mismatches 0; Indels
                                                                                                                                                                      ; OTHER INFORMATION: Amino Acids 463 to 1315 of SEQ ID NO: 1 US-08-913-880C-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Amino Acids 458 to 1315 of SEQ ID NO: US-08-913-880C-16
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; OTHER INFORMATION: Amino Acids 456 to 1315 of SEQ ID NO:
US-08-913-880C-15
CURRENT APPLICATION NUMBER: US/08/913,880C
CURRENT FILING DATE: 1997-11-24
NUMBER OF SEQ ID NOS: 17
SEQ ID NO 17
LENGTH: 853
                                                                                                                                                                                                                                                                                                                                               16 LFNNFTVSFWLRVPKVSASHLE 37
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                                                                                                                                                                                                                                                                                                                         16 LENNFTVSFWLRVPKVSASHLE 37
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95.5%;
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95.5%;
                                                                                                                                                                                                                                  Query Match
Best Local Similarity 95.5%;
Matches 21; Conservative 1
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ORGANISM: Clostridium tetani
                                                                                                            TYPE: PRT ORGANISM: Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: PRT ORGANISM: Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local Similarity 95.59
Matches 21; Conservative
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Best Local Similarity 95.55
Matches 21; Conservative
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Gaps
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Pred. No. 6.1e-09;
1; Mismatches 0; Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/280,228
FILING DATE: 25-JUL-1994
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/618,312
FILING DATE: 27-NOV-1990
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ADDRESSEE: NIXON & VANDERHYE P.C. STREET: 1100 No. 5571694th Glebe Road
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     FILING DATE: 17-MAR-1990
ATTORNEY/AGENT INFORMATION:
NAME: Wilson, Mary J.
REGISTRATION NUMBER: 32,955
REFERENCE ACCOUNTY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       PRIOR APPLICATION DATA:
APPLICATION NUMBER: GB 8926832.0
FILING DATE: 28-NOV-1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: GB 9006097.1
                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Romanos Dr, Michael A APPLICANT: Clare Dr, Jeffrey J APPLICANT: Fairweather Dr, Neil F TITLE OF INVENTION: VACCINES NUMBER OF SEQUENCES: 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Sequence 4, Application US/08280228
Patent No. 5571694
GENERAL INFORMATION:
APPLICANT: Makoff Dr, Andrew J
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 816-4000
TELEFAX: (703) 816-4100
TELEFAX: 200797 NIXN UR
INFORMATION FOR SEQ ID NO: 4:
                                                                                                                                                                                                                              Query Match 57.0%;
Best Local Similarity 95.5%;
Matches 21; Conservative
                                                                                                  : 452 amino acids
amino acid
           (703) 816-4100
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    LENGTH: 452 amino acids TYPE: amino acid
                           TELEX: 200797 NIXN URINFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS: LENGTH: 452 amino acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE CHARACTERISTICS
                                                                                                                                                            ; MOLECULE TYPE: protein US-08-280-228-2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ; MOLECULE TYPE: protein US-08-280-228-4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CORRESPONDENCE ADDRESS:
ADDRESSEE: NIXON & VA
                                                                                                                                              linear
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STATE: Virginia COUNTRY: U.S.A. ZIP: 22201-4714
                                                                                                                                         TOPOLOGY:
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         TELEFAX:
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MEDIUM TYPE: FIOPPY disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFFWARE: PAtentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/280,228
FILING DATE: 25-JUL-1994
CLASSIFICATION NUMBER: US 07/618,312
PRIOR APPLICATION NUMBER: US 07/618,312
PRIOR APPLICATION NUMBER: US 07/618,312
FILING DATE: 28-NOV-1990
FILING DATE: 28-NOV-1990
PRIOR APPLICATION NUMBER: GB 906697.1
FILING DATE: 28-NOV-1990
PRIOR APPLICATION NUMBER: GB 9006097.1
FILING DATE: 17-MAR-1990
ATPLICATION NUMBER: GB 9006097.1
FILING DATE: 17-MAR-1990
ATPLICATION NUMBER: GB 9006097.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             : NIXON & VANDERHYE P.C.
1100 No. 5571694th Glebe Road
PRICATION NUMBER: PCT/CB90/00943
FILING DATE: 20-JUN 1990
PRIOR APPLICATION DATA:
APPLICATION DATA:
APPLICATION NUMBER: GB 8914122.0
FILING DATE: 20 June 1989
ATTORNEY/AGENT INFORMATION:
NAME: MATY J. Wilson
REGISTRATION NUMBER: 32,955
REFERNICE/DOCKET NUMBER: 117-134
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 816-4000
TELEX: 200797 NIXN UR
INFORMATION FOR SEQ ID NO: 8:
SEQUENCE CHARACTER/STICS:
LENGTH: 452 amino acids
TYPE: amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 2, Application US/08280228
; Patent NO. 5571694
; GENEAL-INFORMATION:
APPLICANT: Makoff Dr, Andrew J
APPLICANT: Romanos Dr, Michael A
; APPLICANT: Clare Dr, Jeffrey J
APPLICANT: Fairweather Dr, Neil F
TITLE OF INVENTION: VACCINES
; NUMBER OF SEQUENCES: 13
; CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER: 117-163
TELECOMMUNICATION INFORMATION:
TELEPHONE: (703) 816-4000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           16 LFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NAME: Wilson, Mary J. REGISTRATION NUMBER: 32,955
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                (703) 816-4000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Local Similarity 95.5
les 21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                 TOPOLOGY: linear
MOLECULE TYPE: protein
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ZIP: 22201-4714
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy o
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CITY: Arlington,
STATE: Virginia
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    COUNTRY: U.S.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                 US-08-110-786A-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT 5
US-08-280-228-2
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Matches
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Sequence 8, Application US/08110786A
Sequence 8, Application US/08110786A
Sequence 8, Application US/08110786A
SEMERAL INFORMATION:
APPLICANT: FAIRWEATHER, Neil Fraser
APPLICANT: MAKOFF, Andrew Joseph
TITLE OF INFORMION: Expression of tetanus toxin fragment C
NUMBER OF SEQUENCES: 8
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           57.0%; Score 114; DB 1; Length 452; 95.5%; Pred. No. 6.1e-09;
                                                   COMPUTER READABLE FUAM:
MEDIUM TYPER ELADABLE FUAM:
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOUTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/618,312A
FILING DATE: 1991016
CLASSIFICATION DATA:
APPLICATION NUMBER: GB 8926832.0
FILING DATE: 28-NOV-1989
PRIOR APPLICATION NUMBER: GB 9006097.1
FILING DATE: 12-MAR-1990
ATTORNEY/AGENT INFORMATION:
RECEISTATION NUMBER: 25,327
RECISTRATION NUMBER: 25,327
RECEISTATION NUMBER: 510-51
TELECOMMUNICATION INFORMATION:
TELEFONDE: 0101 703 8750400
TELEFONDE: 0101 703 8750400
TELEEVA: 0101 703 8750400
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION INFORMATION:
TELECOMMUNICATION ON SECOID NO: 4:
SEQUENCE CHARACTERISTICS:
LENGTH: AMINO ACID
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MEDIUM TYPE: Floppy disk COMPUTER: IBM PC COMPATIBLE OF STATE: PC-DOS/MS-DOS SOFTWARE: PATENTIN PATA: APPLICATION DATA: APPLICATION NUMBER: US/08/110,786A FLING DATE: 23-AUG-1993 1991
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Mismatches
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PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 07/77,337
FILING DATE: 29-NOV-1991
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         16 LFNNFTVSFWLRVPKVSASHLE 37
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Matches 21; Conserv
     U.S.A.
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     COUNTRY:
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Pred. No. 6.1e-09;
1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SOFTWARE PATENTIN Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/618,312A
FILING DATE: 19910516
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: GB 8926832.0
FILING DATE: 28-NOV-1989
PRIOR APPLICATION DATA:
APPLICATION NUMBER: GB 9006097.1
FILING DATE: 17-MAR-1990
ATTORNEY/AGENT INFORMATION:
NAME: CTAWFORD MY. ATTHUR R
                  GENERL NO. 53895-00
GENERL INFORMATION:
APPLICANT: MAKOFÉ Dr., Andrew J
APPLICANT: Romanos Dr., Michael A
APPLICANT: Romanos Dr., Michael A
APPLICANT: Clare Dr., Jeffrey J
APPLICANT: Enirweather Dr. Neil F
TITLE OF INVENTION: VACCINES
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
ADDRESSEE: 14th Floor
STREET: 2200 Clarendon Boulevard,
CITY: Arlington,
STATE: Virginia
COUNTRY: U.S.A.
ZIP: 22201
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NAME: Crawford Mr, Arthur R
REGISTRATION NUMBER: 25,327
REFERENCE/DOCKET NUMBER: 510-51
TELECOMMUNICATION INFORMATION:
TELEPHONE: 0101 703 8750400
TELERAX: 0101 703 875040
TELEX: 200797 NIXN UR
INFORMATION FOR SEQ ID NO: 2:
SEQUENCE CHARACTERISTICS:
LENGTH: 452 amino acids
TYPE: AMINO ACID
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Patent No. 5389540
GENERAL INFORMATION:
APPLICANT: Makoff Dr, Andrew J
APPLICANT: Romanos Dr, Michael A
APPLICANT: Clare Dr, Jeffrey J
APPLICANT: Falrweather Dr, Neil F
7 ITILE OF INVENTION: VACCINES
NUMBER OF SEQUENCES: 13
CORRESPONDENCE ADDRESS:
ADDRESSEE: 14th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   2200 Clarendon Boulevard,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             16 LFNNFTVSFWLRVPKVSASHLE 37
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95.5%;
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Best Local Similarity 95.5
Matches 21; Conservative
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US-07-618-312A-2
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Sequence

12, Appl 8, Appli 8, Appli 5, Appli 6, Appl 14, Appl 14, Appl 5, Appli 7, Appli 11, Appl 11, Appl 11, Appli 11, Appli

sequence seq

US-09-102-716-12 US-08-433-483A-3 US-09-148-711A-8 US-09-589-717-5 US-08-945-289-3 PCT-US93-11703-66 US-08-446-692-14 US-08-446-692-5 US-09-100-409A-41 US-09-100-409A-41 US-09-100-525-2 US-08-119-704-11 US-07-610-525-3 US-08-8119-704-11 US-07-610-525-3 US-08-8119-704-11 US-07-610-525-3 US-08-8119-704-11 US-07-610-525-3 US-08-8119-704-11

221 221 222 222 222 222 222 223 224 114 114 ALIGNMENTS

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2, A
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    5.1.6
Compugen Ltd.
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1 XHWSYGLRPGSSGPSLFNNFTVSFWLRVPKVSASHLE
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US-07-618-312A-2
US-07-618-312A-4
US-08-110-786A-8
US-08-280-228-2
US-08-280-228-4
US-08-913-880C-17
US-08-913-880C-17
US-08-913-880C-15
US-08-913-880C-15
US-08-913-880C-12
US-08-13-880C-12
US-08-13-880C-12
US-08-13-880C-12
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US-09-188-08-12
US-09-188-08-12
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                                                                                                                                                                                                                                                                                                                                                                     328717 seqs, 42310858 residues
      version:
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Maximum Match 100%
Listing first 45 summaries
                                                                                            sw model
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Gapop 10.0 , Gapext 0.5
    GenCore
Copyright (c) 1993
                                                                                   · protein search, using
                                                                                                                                                                                                                                                                                                                                                                                                                                                          seq length: 0
seq length: 200000000
                                                                                                                                                                                                                    US-09-848-834A-14
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Match Length
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Maximum DB :
                                                                                   protein
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	Gaps	
	0;	
RESULT 1 PCT-US93-11703-64 Sequence 64, Application PC/TUS9311703 GENERAL INCRANION: APPLICAMY: Chirch Mimotopes Pty. Ltd. TTLE OF INVENTION: T-Cell Epitopes CORRESPONDENCES: 75 CORRESPONDENCE ADERESS: ADDRESSEE: 4560 HOTTON St. STREET: 4560 HOTTON St. STREET: 4560 HOTTON St. STREET: 4560 HOTTON St. STREET: BENEYVILE COMPUTER READABLE FORM: WEDIUM TYPE: FLOPPY disk COMPUTER READABLE FORM: WEDIUM TYPE: PLOPPY disk COMPUTER READABLE FORM: APPLICATION WUBER: PCT/US93/11703 FILING DATE: 28-DEC-1993 FILING DATE: 28-DEC-1993 FILING DATE: 28-DEC-1992 ATTORNEY AGONT INVENANTION: PROSETTION WUBER: 31,259 REFERENCE/DOCKET WUBBER: 31,259 REFERENCE/DOCKET WUBBER: 31,259 TELEPRAX: 510-655-3542 TELEPRAX: 510-655-3542 TELEPRAX: 510-655-3542 TELEPRAX: 510-655-3542 TYPE: amino acids TYPE: amino acids TYPE: amino acids TYPE: amino acids TYPE: amino acid STRANDEDNESS: single PCT-US93-11703-64	Query Match 57.0%; Score 114; DB 5; Length 31; Best Local Similarity 95.5%; Pred. No. 2.4e-10; Matches 21; Conservative 1; Mismatches 0; Indels	OY 16 LFNNFTVSFWLRVDRVSASHLE 37 :111111111111111111111111111111111111

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The present invention is concerned with methods of treating asthma, ossinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and helminthic infections.
                                                                                                                                                                                                                                                                                Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 58.5%; Score 117; DB 21; Length 124; Best Local Similarity 95.7%; Pred. No. 3e-09; Matches 22; Conservative 1; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                        Example 7; Page 141; 172pp; English.
                                                                                                                 99DK-0000552.
99US-0132811.
                                                                               19-APR-2000; 2000WO-DK00205
                                                                                                                                                                    (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                    WPI; 2000-672791/65.
N-PSDB; AAC68868.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                124 AA;
              WO200065058-A1.
                                                                                                               23-APR-1999;
                                                                                                                                  06-MAY-1999;
                                               02-NOV-2000
                                                                                                                                                                                                     Klysner S;
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Search completed: September 24, 2003, 17:40:06 Job time: 42.8172 secs

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0; Gaps

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us-09-848-834a-14.rag

AAB45496 standard; Protein; 124 AA.

AAB45496;

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antigen (PSM) constructs, which contain a foreign epitope, P30. The analogues can be used to study whether autotolerance to mouse PSM can be used to study whether autotolerance to mouse PSM can be been contain adjoin against murine PSM using murine PSM analogues. Immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human PSM, heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGP8b). The method comprises effecting simultaneous presentation by antigen producing cells (APCS) of the animals immune system of: (1) at least 1 GTL (cytotoxic T-1ymphocyte) cynomical from the PA and/or at least 1 B-cell group derived from the PA and/or at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and contained for the animal.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Her2, respectively.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       AAY92659-62 are mutant immunogenized murine prostate specific membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Dalum I;
                                                                                                                                                                                                                      Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                    Mutant murine prostate specific membrane antigen construct, mPSMY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                tumor associated
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Leach D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Haaning J,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Mouritsen S, Nielsen KG,
Wirk P, Karlsson G;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Location/Qualifiers
689..709
/label= P30
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99WO-DK00525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     98DK-0001261
98US-0105011
                                                                      10-AUG-2000 (first entry)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              WPI; 2000-349917/30.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 761 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200020027-A2
                                                                                                                                                                                                                                                                                                                                                                                  Mus musculus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           05-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            20-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 13-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Steinaa L,
                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gautam A,
AAY92660;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Peptide
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The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (LL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and
                                                                                                        Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                          Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ö
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Length 124;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 117; DB 21;
Pred. No. 3e-09;
1; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Modified human interleukin-5 SEQ ID NO: 30.
                                                                             Modified human interleukin-5 SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Example 7; Page 124; 172pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              15 SLFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB45515 standard; Protein; 124 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        58.5%;
95.7%;
                                                                                                                                                                                                                                                                       99DK-0000552.
99US-0132811.
                                                                                                                                                                                                                                            19-APR-2000; 2000WO-DK00205
                                                     (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
                                                                                                                                                                                                                                                                                                              (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    helminthic infections.
                                                                                                                                                                                                                                                                                                                                                                  WPI; 2000-672791/65.
                                                                                                                                                             Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
nes 22; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Homo sapiens.
Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              124 AA;
                                                                                                                                                                                       WO200065058-A1.
                                                                                                                                                  Homo sapiens
                                                                                                                                                                                                                                                                       23-APR-1999;
                                                    26-FEB-2001
                                                                                                                                                                                                                                                                                    06-MAY-1999;
                                                                                                                                                                                                                 32-NOV-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            26-FEB-2001
                                                                                                                                                                                                                                                                                                                                         Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AAB45515;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               RESULT 15
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qq
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Gaps

0;

5; Indels

10 GSSGPSLFNNFTVSFWLRVPKVSASHLE 37

Score 118; DB 21; Length 761; Pred. No. 1.8e-08; 0; Mismatches 5; Indels (

59.0%; 82.1%;

Local Similarity 82.1 nes 23; Conservative

Best Loc Matches

ò

Query Match

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Prostate specific membrane antigen; splice variant; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer
                                      Mutant murine PSM splice variant construct, mPSM'Y.
                                                                                                                                                                                                                                                                                                                                                                                                                                                         Mouritsen S, Nielsen KG, Haaning J,
Birk P, Karlsson G;
                                                                                                                                                                                             Location/Qualifiers
631..651
/label= P30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Example 1; Page -; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                        98DK-0001261.
98US-0105011.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            59.08;
                                                                                                                                                                                                                                                                                                                                     99WO-DK00525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             82.18;
10-AUG-2000 (first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Best Local Similarity 82.1
Matches 23; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                           (MEBI-) M & E BIOTECH AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                MPI; 2000-349917/30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          703 AA;
                                                                                                                                                                                                                                                                WO200020027-A2
                                                                                                                                            Mus musculus.
Synthetic.
                                                                                                                                                                                                                                                                                                                                     05-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                        05-OCT-1998;
20-OCT-1998;
                                                                                                                                                                                                                                                                                                   13-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Steinaa L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Gautam A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Query Match
                                                                                                                                                                                                             Peptide
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             The present sequence is that of AutoVac construct GDF-8 p30-2, comprising the 109 C-terminal amino acid residues of human growth differentiation factor 8 (GDF-8) in which residues 49-69 are replaced by the promiscuous tetanus toxin T-cell epitope P30 (see AAB2014). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the muscle growth care of farm animals. The vaccines (see AAB20145-53) are capable of breaking autotolerance against autoLogous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the mainimal disturbance of the authentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used the genetic immunisation of the animals. Down-regulation of GDF-8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       activity can increase muscle mass by up to at least 45% in cattle, pigs and poultry used for meat production, reducing the need for antibiotic feed-additives. Anti-GPF8 vaccines can be used to treat human diseases such as cancer cachexia where muscle atrophy is pronounced and for patients suffering from acute and chronic heart
                                                                                                                                                        . 9
                /note= "identical to residues 267-314 of human
                                                                                                     /note= "identical to residues 336-375 of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  59.0%; Score 118; DB 22; Length 109; ilarity 61.0%; Pred. No. 1.8e-09; Conservative 2; Mismatches 8; Indels (
                                                                                                                                                                                                           /note= "optionally replaced by Glu-Gly"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       3 WSYGLRPG-----SSGPSLFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "tetanus toxoid P2 epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 1; Page 101-102; 110pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                         Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAY92662 standard; Protein; 703 AA
                                    GDF-8"
                                                                                                                                                                                                                                                                                                                                                    99DK-0001014.
                                                                                                                                                                                                                                                                                                                 20-JUL-2000; 2000WO-DK00413.
                                                                                                                                                                                                                                                                                                                                                                                                                                         Mouritsen S,
                                                                      /note= "t
70..109
                                                                                                                                                                                                                                                                                                                                                                                                       (MEBI-) M & E BIOTECH AS
                                                  49..69
                                                                                                                                                                                           Misc-difference 90..91
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          WPI; 2001-112680/12.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
Best Local Similarity
Matches 25; Conserv
                                                                                                                                          Misc-difference 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   109 AA;
                                                                                                                                                                                                                                            WO200105820-A2
                                                                                                                                                                                                                                                                                                                                                  20-JUL-1999;
26-JUL-1999;
                                                                                                                                                                                                                                                                               25-JAN-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                         Halkier T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            59
                                                    Region
                                                                                       Region
Region
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                RESULT 12
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY92662
ID AAY9
XX
AC AAY9
XX
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Dalum I;

Leach D,

tumor associated

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antigen (PSM) constructs, which contain a foreign epitope, P30. The antigen (PSM) constructs, which contain a foreign epitope, P30. The analogues can be used to study whether autocolerance to mouse PSM can be becaded to study whether autocolerance to mouse PSM can be broken in mice by immunisation and/or DNA vaccination against murine PSM using murine PSM analogues. Immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human PSM, heregulin 2 (Her2) and/or fibroblast growth factor 80 FGR80). The method comprises effecting simultaneous presentation by antigen producing cells (ApcS) of the animals immune system of: (1) at least 1 B-cell group derived from the PA and/or at least 1 B-cell group derived from the PA and/or at least 1 B-cell group derived from the enimal of 2) at least 1 first T helper cell group which is foreign to the animal part of all known and human/murine FGR80 comprising a substantial part of all known and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Her2, respectively
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   splice variant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Note: This sequence was constructed from the murine PSM splice v
(AAY92624), which appears on pages 210-213 of the specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 703;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 118; DB 21;
Pred. No. 1.6e-08;
0; Mismatches 5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10 GSSGPSLFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAY92660 standard; Protein; 761 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              RESULT 13
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             AAY92660
ID AAY9
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AAY92662;

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N-PSDB; ABA94392
antiarthritic;
             antiasthmatic;
                                                                  WO200197837-A1
                                              Homo sapiens.
                                                                                          27-DEC-2001
                                                                                                                                                                                    Olesen OF,
                                                                                                                                                                                                                                                                              acting as
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Seguence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           AAB20149;
                      INF30-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             RESULT 11
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAB20149
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          QΩ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TNF-alpha; pharmaceutical; vaccine; self-protein; tumour necrosis factor; cetylpyridinium chloride; immunisation; antiinflammatory; antirheumatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              beta-sheet, any of the connecting loops or any of the B', I or D strands in the back beta-sheet. The TNF-alpha analogues are used as vaccines for treatment or prevention of diseases associated with excessive release or activity of TNF-alpha, e.g. rheumatoid arthritis, Crohn's disease, ulcerative colitis, cancer of any sort, disseminated sclerosis, diabetes, psoriasis, osteoporosis and asthma.
                                                                                                                                                                                                                                                                                                                                                                                         The present sequence represents a modified human tunnour necrosis factor-alpha (TNF-alpha) analogue. The analogues have no residual TNF activity and are immunogenic in a large proportion of the human population (by using promiscuous epitopes). The TNF-alpha analogue is able to generate, in humans, neutralizing antibodies to wild-type human TNF alpha, has at least one fragment of TNF substituted by a peptide containing an immunodominant T-cell epitope, and at least one TNF-alpha B-cell epitope. The substitution causes a significant change in the amino acid sequence of any one of the strands in the front
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
                                           Human tumour necrosis factor-alpha; TNF-alpha; TNF-alpha analogue;
vaccine; rheumatoid arthritis; Crohn's disease; ulcerative colitis;
cancer; disseminated sclerosis; diabetes; psoriasis; osteoporosis;
asthma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      DB 19; Length 158;
                                                                                                                                                                                                                                                                                                                      Modified human turmour necrosis factor-alpha - comprises immunodominant T cell epitope, useful in vaccines to treat or prevent TNF-associated diseases, e.g. cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             4;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Score 118.5; DB 1 Pred. No. 2.4e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 VRSSSRTPS-FNNFTVSFWLRVPKVSASHLE 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7 LRPGSSGPSLFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                  Mouritsen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                   Example 1; Page 74-75; 134pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ABB07282 standard; Protein; 158 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Human TNF-alpha analogue TNF30-1.
                                                                                                                                                                                                                                                                 Jensen MR,
                    TNF30-1, a TNF-alpha analogue.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    59.2%;
80.6%;
                                                                                                                                                                                 98WO-DK00157,
                                                                                                                                                                                                      97US-0044187.
97DK-0000418.
                                                                                                                                                                                                                                          (FERR ) FARM LAB FERRING AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (first entry)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local Similarity 80.6
nes 25; Conservative
                                                                                                                                                                                                                                                               Dalum I, Elsner H,
                                                                                                                                                                                                                                                                                      WPI; 1998-594561/50.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              158 AA;
                                                                                                                                                                                                                                                                                                  N-PSDB; AAV68421.
                                                                                                               Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             26-MAR-2002
                                                                                                                                                                                                      24-APR-1997;
15-APR-1997;
                                                                                                                                    W09846642-A1
                                                                                                                                                                                15-APR-1998;
21-APR-1999
                                                                                                                                                           22-OCT-1998
                                                                                                  Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ABB07282;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           RESULT 10
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The invention provides a pharmaceutical vaccine composition (1) for the prevention or treatment of a self-protein-mediated pathology. The composition compises at least one medified immunogenic self-protein (selected from modified TNF-alpha proteins) and a surfactant capable of acting as a solubilizer. (1) is useful for preventing or treating a self arthritis, an inflammatory boxed the same inflammatory disease, heumatoid arthritis, an inflammatory boxed disease, heumatoid arthritis, an inflammatory boxed disease (ulcerative colitis or Crohn's disease), cancer, cachexia, multiple sclerosis, diabetes psoriasis, asteporosis or asthma. (1) is useful for inducting autoantibodies to a self-protein such as TNF (tumour necrosis factor)-alpha in a human subject. (1) comprising cetylpyridinium chloride as a component is useful for immunisation of a human subject or for treatment of a human TNF-alpha analogue TNF30-1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Novel vaccine composition for prevention/treatment of self-protein-mediated pathology such as cancer, diabetes and asthma, comprises modified immunogenic self-protein and surfactant capable of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
antiulcer; cytostatic; antidiabetic; antipsoriatic; immunomodulator; neuroprotective; osteopathic; human;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 118.5; DB 23; Length 158; Pred. No. 2.4e-09;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Growth differentiation factor 8 AutoVac construct GDF-8 P30-2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Indels
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                7 LRPGSSGPSLFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Pred. No.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bouman MHEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Claim 21; Page 48-49; 55pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            AAB20149 standard; Protein; 109 AA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chimeric - Homo sapiens.
Chimeric - Clostridium tetani.
Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        59.2%;
80.6%;
                                                                                                                                                                                                                                                                                                                                            20-JUN-2001; 2001WO-DK00431
                                                                                                                                                                                                                                                                                                                                                                                                         21-JUN-2000; 2000DK-0000966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30-APR-2001 (first entry)
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           158 AA;
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The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down-regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and helminthic infections.
                                                                                                                                                                                                                                                                                                                                                                                                          Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 analogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions -
      Pred. No. 1.5e-09;
3; Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            59.5%; Score 119; DB 21;
81.5%; Pred. No. 1.5e-09;
... Mismatches 2;
                                                                                                                                                                                                                                                                                                                                                               Modified murine interleukin-5 SEQ ID NO: 48.
                             3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     11 SSGPSLFNNFTVSFWLRVPKVSASHLE 37
                                                                                                  24 TSNETMFNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Example 7; Page 156; 172pp; English.
                                                                                                                                                                                                                               AAB45524 standard; Protein; 122 AA
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    81.5%;
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99US-0132811.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 19-APR-2000; 2000WO-DK00205
                                                                                                                                                                                                                                                                                                                      (first entry)
                             22; Conservative
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         Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Mus musculus.
Clostridium tetani.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       122 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        N-PSDB; AAC68877
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             WO200065058-A1
                                                                                                                                                                                                                                                                                                                      26-FEB-2001
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        02-NOV-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Klysner S;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence
                                                                                                                                                                                                                                                                           AAB45524;
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Matches
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                                                                                                                                                                                                             AAB4552
                                                                                                                                                                                      RESULT
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cells (APCS) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA; and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and human/murine FGF8b comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Her2, respectively.

Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         The present invention is concerned with methods of treating asthma, eosinophilia, allergic rhinitis and other allergic diseases. These involve the use of interleukin-5 (IL-5) analogues and modified IL-5 proteins and their coding sequences to down regulate IL-5 activity and thus reduce eosinophil numbers. The allergic diseases may be treated using autovaccines, nucleic acid vaccines or live vaccines. In addition, it is possible that they may be used in the treatment of cancer and helminthic infections.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Asthma; IL-5; interleukin-5; allergy; cytokine; helminthic infection; cancer; eosinophilia; vaccine; allergic rhinitis.
                                                                                                                                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Down-regulating interleukin 5 (IL-5) activity in humans by administering IL-5 and/or an IL-5 andlogue, useful in the treatment, prophylaxis or amelioration of asthma or other chronic allergic conditions -
                                                                                                                                                                                                                                                                                                                                                             3;
                                                                                                                                                                                                                                                                                                                 59.8%; Score 119.5; DB 21; Length 750; 78.1%; Pred. No. 1.1e-08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         DB 21; Length 122;
                                                                                                                                                                                                                                                                                                                                                               Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                 249 PGGGVQRGNILFNNFTVSFWLRVPKVSASHLE 280
                                                                                                                                                                                                                                                                                                                                                                                                        9 PGSS---GPSLFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Modified murine interleukin-5 SEQ ID NO: 19.
                                                                                                                                                                                                                                                                                                                                                             Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       59.5%; Score 119;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 7; Page 134; 172pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB45507 standard; Protein; 122
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                                                                                                                                                                                                                                                                                                                                                             Conservative
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                                                                                                                                                                                                                                                                                                                 Query Match
Best Local Similarity
Matches 25; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Clostridium tetani.
                                                                                                                                                                                                                                                                        750 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              122 AA;
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WO200065058-A1.

02-NOV-2000

musculus

AAB45507;

AAB45507

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Sequence

8.888888888888888

(MEBI-) M & E

Klysner S;

Query Match

23-APR-1999; 06-MAY-1999;

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Length 122;

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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8 (GDF-8) activity in the animal through induction of anti-GDF-8 antibody production -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /note- "Cys-73 may be substituted by Ser to avoid disulfide bond formation"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia; cardiant; human; mutant; mutein.
                                                                                                                                                                                                                                                                                                                                                                                                                                             Growth differentiation factor 8 AutoVac construct GDF-8 P30-3B.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     The present sequence is that of AutoVac construct GDF-8 P30-3B,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "identical to residues 267-349 of human
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /note- "identical to residues 371-375 of human GDF-8"
118 PGSTAPPAHGVTSAPDTRFNNFTVSFWLRVPKVSASHLE 156
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY92627-49 are mutant immunogenized human prostate specific membrane antition (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Dalum I;
                                                                                                                                                                                                                     Gaps
                      is
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Mutant human prostate specific membrane antigen construct, hPSM6.3.
                    treat human diseases such as cancer cachexia where muscle atrophy i
pronounced and for patients suffering from acute and chronic heart
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer
                                                                                                                                                                                                                   6
                                                                                                                                                                     Length 109;
Anti-GDF8 vaccines can be used to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Leach D,
                                                                                                                                                                                                                   Indels
                                                                                                                                                                     22;
                                                                                                                                                                          .1e-09;
2;
                                                                                                                                                                                                                                                                                            Haaning J,
                                                                                                                                                                                                                                                                   10 GSSGPSL-----FINNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                            Pred. No. 1.16
1; Mismatches
                                                                                                                                                                     Score 119.5;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  /label= P30
/note= "foreign epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 448..462
/label= P2
/note= "foreign epitope"
210..230
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                        AAY92644 standard; Protein; 750
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                                                                                                                                                                  59.8%;
llarity 67.6%;
Conservative
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antibiotic feed-additives.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (MEBI-) M & E BIOTECH AS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    WPI; 2000-349917/30.
                                                                                                                                                                                            Local Similarity
les 25; Conserv
                                                                                                                       109 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO200020027-A2
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-OCT-1999;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          05-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         10-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       13-APR-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Steinaa L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Gautam A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AAY92644;
                                                                                                                          Sequence
                                                                                                                                                                       Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Key
Peptide
                                                                         failure
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Peptide
                                                                                                                                                                                                   Best Loc
Matches
                                                                                                                                                                                                                                                                                                                                                                                           RESULT 6
                                                                                                                                                                                                                                                                                                                                                                                                                    AAY92644
```

Mucin repeat; MUC-1 analogue; vaccination; self-protein; cancer; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.

Location/Qualifiers 61..75 /label= P2

Peptide Peptide

Homo sapiens

136..156 /label= P30 /note= "q"

WO200020027-A2

99WO-DK00525

98US-0105011 98DK-0001261

05-OCT-1998; 20-OCT-1998; 05-0CT-1999; 13-APR-2000.

(MEBI-) M & E BIOTECH AS.

MUC-1 analogue containing foreign epitopes.

10-AUG-2000 (first entry)

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The present sequence is that of AutoVac construct GDF-8 P30-3A, comprising the 109 C-terminal amino acid residues of human growth differentiation factor 8 (GDF-8) in which residues 79-99 are replaced by the promiscuous tetanus toxin T-cell epitope P30 (see CAB20144). It is an object of the invention to produce a recombinant therapeutic vaccine that is capable of effecting down-regulation of GDF-8 in order to increase the musche growth crare of farm animals. The vaccines (see AAB20145-53) are capable of breaking autotolerance against autologous GDF-8. They comprise the C-terminal portion of human GDF-8 in which a portion of the minimal disturbance of the authentic 3-dimensional structure of the protein. Nucleic acids encoding the GDF-8 variants can be used the genetic immunisation of the animals. Down-regulation of GDF-8
                                                                                                                                                                                                                                                                                                                      Increasing the muscle mass of animals used in meat production by down regulating growth differentiation factor 8~({\rm GDF-8}) activity in the animal through induction of anti-GDF-8~{\rm antibody~production} -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   treat human diseases such as cancer cachexia where muscle atrophy is pronounced and for patients suffering from acute and chronic heart
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   activity can increase muscle mass by up to at least 45% in cattle, plys and poultry used for meat production, reducing the need for
                                                                                                        /note= "identical to residues 267-345 of human GDF-8"
                                                                       /note= "identical to residues 366-375 of human GDF-8"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Anti-GDF8 vaccines can be used to
                                                                                                                                      /note= "optionally replaced by Glu-Gly"
                                                   /note= "tetanus toxoid P2 epitope"
                                                                                                                                                                                                                                                                                                                                                              Example 1; Page 102-103; 110pp; English.
                                                                                                                                                                                                                                                                               Mouritsen S, Klysner S;
Location/Qualifiers
                                                                                                                                                                                                                          99DK-0001014.
                                                                                                                                                                                                    20-JUL-2000; 2000WO-DK00413
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          antibiotic feed-additives.
                                                              100..109
                                                                                                                                                                                                                                                         (MEBI-) M & E BIOTECH AS
                                                                                                                             Misc-difference 90..91
                                                                                                                                                                                                                                                                                                  WPI; 2001-112680/12
                                                                                             Misc-difference 73
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              109 AA;
                                                                                                                                                           WO200105820-A2
                                                                                                                                                                                                                         20-JUL-1999;
26-JUL-1999;
                                                                                                                                                                                25-JAN-2001
                                                                                                                                                                                                                                                                             Halkier T,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
 Key
Region
                                         Region
                                                              Region
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Dalum I;

Leach D,

Haaning J,

Nielsen KG,

Mouritsen S, Niels Birk P, Karlsson G;

Steinaa L, Gautam A, WPI; 2000-349917/30.

Inducing immune responses to weakly immunogenic, tumor associated peptide antigens for the treatment of breast and prostate cancer

```
This is an immunogenized WUC-1 analogue containing foreign epitopes P2 and P30. Immunogenic analogues of MUC-1 and, e.g. human prostate and P30. Immunogenic analogues of MUC-1 and, e.g. human prostate at the contained method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms (see features table). In regions suitable for the insertion of foreign T helper epitopes were identified. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. hPSM, heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGF8b). The method comprises and/or fibroblast growth factor 8b (FGF8b). The method comprises cascociated proteins), e.g. hPSM, heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGF8b). The method comprises the animals immune system of: (1) at least 1 CTL (cytotoxic the animals immune system of: (1) at least 1 Last 1 B-cell group arrived from the PA and/or at least 1 B-cell group arrived from the PA and/or at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human PSM, human PSM, rore at least or helper to the animal and part of all known and predicted CTL and B-cell epitopes of the respective PA and including used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Her2, respectively.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ä
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Note: This sequence does not appear in the specification. It was madusing the mucin repeat sequence (AAY92664), P2 and P30 (AAY92625-26), which appear on pages 220, 213 and 214 respectively, of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length 216;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               9 PGSSGP-----SLFNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ch 60.5%; Score 121; DB 21;
1 Similarity 64.1%; Pred. No. 1.5e-09;
25; Conservative 2; Mismatches 2;
Example 4; Page -; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       216 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      specification.
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Gaps

4,

61.5%; Score 123; DB 22; Length 109; 78.1%; Pred. No. 3.4e-10; ive 2; Mismatches 1; Indels

10 GSSG----PSLFNNFTVSFWLRVPKVSASHLE 37

Conservative

Local Similarity les 25; Conserv

Best Loc Matches

셤 à

Query Match

AAY92665 standard; Peptide; 216 AA.

AAY92665;

AAY92665 ID AAY9 XX AC AAY9 RESULT 4

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WO200185763-A2
                                                                             Modified-site
                                                                                                                                   15-NOV-2001.
                                                                                                                                                                                                                          Grimes S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               AAB20150;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                        Peptide
   Peptide
                                             Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     RESULT 3
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  δ
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                                                                                                                                                                                                                    The Invention relates to a synthetic immunogen for inducing specific antibodies against gonadotropin releasing hormone (GnRH also known as luteinising hormone releasing hormone (GnRH also known peptide which comprises a promisecous helper T-cell peptide epitope and immunomninc peptide epitope or its analogue. The synthetic immunomninc peptide epitope or its analogue. The synthetic fumunomninc peptide epitope or its analogue. The synthetic and man animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Juteinising hormone releasing hormone; LHRH; contraceptive; promiscuous helper T-cell peptide epitope; immunominic peptide epitope; breast cancer; uterine cancer; gynaecological cancer; endometriosis; uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note= "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                     gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'note= "Gonadotrophin releasing hormone epitope
                                                                                                                                                                                                                                                                                                                                                                                                                 ö
                                                                                                                                            synthetic immunogen for inducing immune response against
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
                                                                                                                                                                                                                                                                                                                                                                                            Length 37;
                                                                                                                                                                                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                                                                                                                                                                                                                                                ö
                                                                                                                                                                                                                                                                                                                                                                                          DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                     37
                                                                                                                                                                                                                                                                                                                                                                                                                                                 99.5%; Score 199; DB 23
ilarity 100.0%; Pred. No. 6e-22;
Conservative 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                     2 HWSYGLRPGSSGPSLFNNFTVSFWLRVPKVSASHLE
                                                                                                                                                                                                                                                                                                                                              is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           /note= "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Location/Qualifiers
                                                                                                  Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ¥
                                                                                                                                                                                                Claim 11; Page 9; 43pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Synthetic immunogen peptide 10.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Chimeric - Clostridium tetani
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          'label = OTHER
                                04-MAY-2001; 2001WO-US14363.
                                                     05-MAY-2000; 2000US-202328P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AAU11429 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (1..10 aa)"
11..16
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            (first entry)
                                                                                                                                                                             epitope or its analogue
                                                                                                Michaeli D,
                                                                                                                                                                                                                                                                                                                                                                                          Query. Match
Best Local Similarity
Matches 36; Conserva
                                                                            (APHT-) APHTON CORP
                                                                                                                      WPI; 2002-049440/06
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Chimeric - Mammalia.
                                                                                                                                                                                                                                                                                                                                                                    37 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            12-MAR-2002
          15-NOV-2001
                                                                                                 Grimes S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Synthetic.
                                                                                                                                                                                                                                                                                                                                                                      Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAU11429;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Peptide
                                                                                                                                             Novel
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            RESULT
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antibodies against gonadotropin releasing hormone (GRRH also known peptide which comprises a promiseuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immuno response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GRRH antibody titres. The present sequence is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           The invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Growth differentiation factor 8; GDF-8; myostatin; tetanus toxin; T-cell epitope; down-regulation; vaccine; muscle; meat; cachexia;
                                                                                                                        42..50
/note= "Gonadotrophin releasing hormone epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 50;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                /note= "Amidated glycine or glycinamide"
                                "Tetanus toxoid (947-967 aa)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               99.5%; Score 199; DB 23;
100.0%; Pred. No. 8.5e-22;
iive 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       2 HWSYGLRPGSSGPSLFNNFTVSFWLRVPKVSASHLE 37
                                                                                           "Spacer peptide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Stevens VC;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Ā.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 11; Page 11; 43pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               cardiant; human; mutant; mutein.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chimeric - Homo sapiens.
Chimeric - Clostridium tetani.
                                                                                                                                                                                                                                                                                                                                                                                                                                         04-MAY-2001; 2001WO-US14363
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                                                                                                                                                                                         aa)"
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Best Local Similarity 100.
Matches 36; Conservative
17..37
/note=
                                                                 38..41
/note=
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50
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Michaeli D,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     (APHT-) APHTON CORP.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       WPI; 2002-049440/06
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September 24, 2003, 16:58:36; Search time 41.8172 Seconds (without alignments) 140.442 Million cell updates/sec
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GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
                                                                                                                                                                                                                        1 XHWSYGLRPGSSGPSLFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                      Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                    1107863 seqs, 158726573 residues
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Maximum Match 100%
Listing first 45 summaries
                                                                      OM protein - protein search, using sw model
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Gapop 10.0 , Gapext 0.5
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200
                                                                                                                                                                                                                                                                                                                                                                                             length: 0
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Sequence:
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Maximum DB seq
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                                                                                                          Run on:
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1. SIDSI/gcgdata/geneseq/geneseqp-embl/AA1980.DAT:*
2. SIDSI/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:*
3. SIDSI/gcgdata/geneseq/geneseqp-embl/AA1981.DAT:*
4. SIDSI/gcgdata/geneseqy-embl/AA1981.DAT:*
5. SIDSI/gcgdata/geneseqy-embl/AA1981.DAT:*
6. SIDSI/gcgdata/geneseqy-embl/AA1981.DAT:*
7. SIDSI/gcgdata/geneseqy-embl/AA1981.DAT:*
8. SIDSI/gcgdata/geneseqy-embl/AA1981.DAT:*
9. SIDSI/gcgdata/geneseqy-embl/AA1981.DAT:*
10. SIDSI/gcgdata/geneseqy-embl/AA1980.DAT:*
11. SIDSI/gcgdata/geneseqy-embl/AA1980.DAT:*
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13. SIDSI/gcgdata/geneseqy-embl/AA1980.DAT:*
14. SIDSI/gcgdata/geneseqy-embl/AA1991.DAT:*
15. SIDSI/gcgdata/geneseqy-embl/AA1991.DAT:*
16. SIDSI/gcgdata/geneseqy-embl/AA1991.DAT:*
17. SIDSI/gcgdata/geneseqy-embl/AA1991.DAT:*
18. SIDSI/gcgdata/geneseqy-embl/AA1991.DAT:*
19. SIDSI/gcgdata/geneseqy-embl/AA1991.DAT:*
11. SIDSI/gcgdata/geneseqy-embl/AA1991.DAT:*
12. SIDSI/gcgdata/geneseqy-embl/AA1999.DAT:*
13. SIDSI/gcgdata/geneseqy-embl/AA1999.DAT:*
14. SIDSI/gcgdata/geneseqy-embl/AA1999.DAT:*
15. SIDSI/gcgdata/geneseqy-embl/AA1999.DAT:*
17. SIDSI/gcgdata/geneseqy-embl/AA1999.DAT:*
18. SIDSI/gcgdata/geneseqy-embl/AA1999.DAT:*
19. SIDSI/gcgdata/geneseqy-embl/AA1999.DAT:*
20. SIDSI/gcgdata/geneseqy-embl/AA1999.DAT:*
21. SIDSI/gcgdata/geneseqy-embl/AA1999.DAT:*
22. SIDSI/gcgdata/geneseqy-embl/AA2001.DAT:*
23. SIDSI/gcgdata/geneseqy-embl/AA2001.DAT:*
24. SIDSI/gcgdata/geneseqy-embl/AA2001.DAT:*
25. SIDSI/gcgdata/geneseqy-embl/AA2001.DAT:*
27. SIDSI/gcgdata/geneseqy-embl/AA2001.DAT:*
28. SIDSI/gcgdata/geneseqy-geneseqp-embl/AA2001.DAT:*
28. SIDSI/gcgdata/geneseqy-geneseqp-embl/AA2001.DAT:*
28. SIDSI/gcgdata/geneseqy-geneseqp-embl/AA2001.DAT:*
28. SIDSI/gcgdata/geneseqy-geneseqp-embl/AA2001.DAT:*
28. SIDSI/gcgdata/geneseqy-geneseqp-embl/AA2001.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

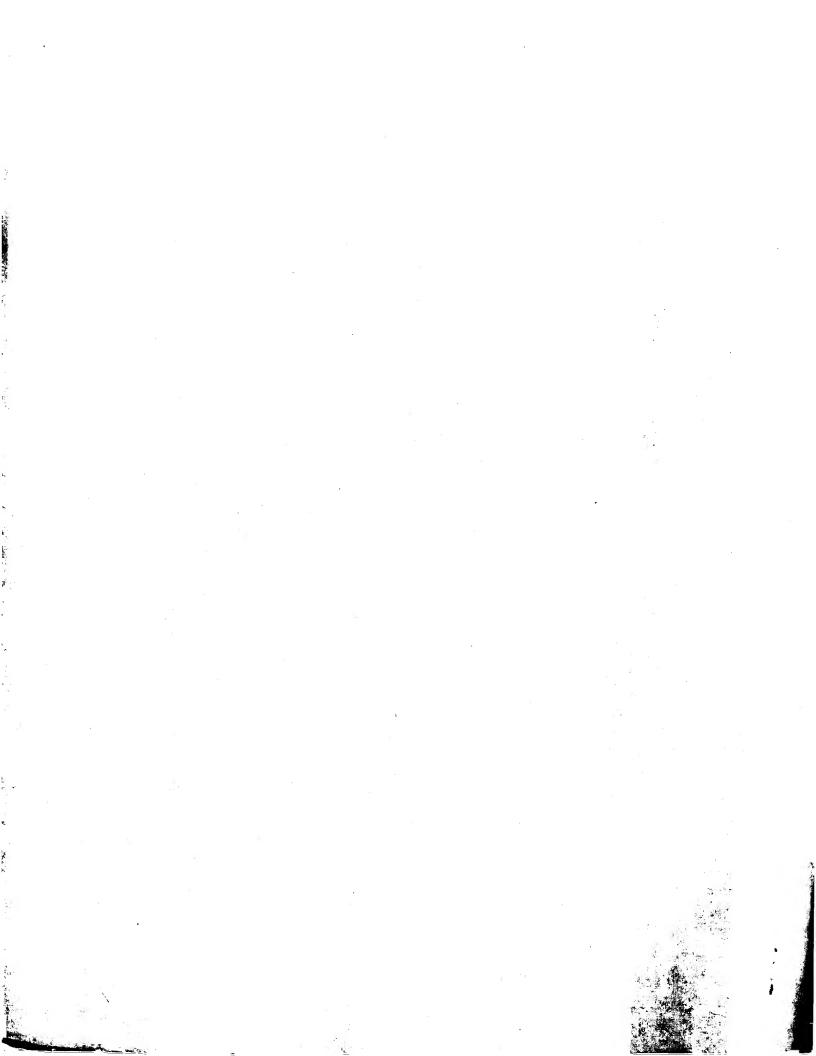
		Description	05000000000000000000000000000000000000	of or other property of the pr	Synthetic immunode	Growth differentia	MUC-1 analogue con	Growth differentia	Mutant human prost	Modified murine in	Modified murine in	TNF30-1, a TNF-alp
		ID	A M 11 1 1 0 5	CAPTION	AAU11429			AAB20151				
		DB	23	3	23	22	21	22	21	21	21	19
		Match Length DB ID	37	5	20	109	216	109	750	122	122	158
æ	Query	Match	5 00		99.5	61.5	60.5	59.8	59.8	59.5	59.5	59.2
		Score	100	1	199	123	121	119.5	119.5	119	119	118.5
	Result	No.	-	•	7	m	4	Ŋ	9	7	æ	6

NF-alpha differen murine p d human d human differen	ם אינים נד	Modified human int TNF30-3, a TNF-alp Human TNF-alpha an An Osteoprotegerin Growth differentia Mutant human prost	human human human human human	Mutant human PSM a Mutant human PSM a Mutant human prost Mutant human prost Modified human int Tetanus toxin frag Amino acid sequenc
ABB07282 AAB20149 AAY92662 AAY92660 AAB45496 AAB45515 AAB20153 AAY92653	AAB46177 AAB49076 AAB46190 AAB20148 AAB49089 AAB4530	AAB45522 AAW81334 ABB07274 AAY423 AAY92627 AAY92627	AAY92622 AAY92630 AAY92631 AAY92637 AAY92638 AAY92639	AAY92647 AAY92648 AAY92645 AAX92646 AAB45497 AAB45516 AAB45516
23 21 21 22 22 23	755555	21 22 22 21 21	222222	22211221
158 1099 703 761 124 160	43 43 109 145	147 158 158 188 750	750 750 750 750 750	693 750 750 130 452 453
59.0 59.0 59.0 58.5 58.5 68.5			88.000.000 88.0000000000000000000000000	
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10 112 13 13 14 15 17	222 232 232 232 232 232 232 232 232 232	42222 2222 2326 4326 4326 4326 4326 4326	37 37 37 37 37 37	86 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4

ALIGNMENTS

RESULT 1

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Gonadotrophin releasing hormone; GnRH; synthetic immunogen;
luteinising hormone releasing hormone; LHRH; contraceptive;
promiscuous helper T-cell peptide epitope; immunomimic peptide epitope;
breast cancer; uterine cancer; gynaecological cancer; endometriosis;
uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                                                /note= "Other= Pyro-glutamic acid or 5-oxo proline"
                                                                                                                                                                                                                                                                                                            1..10
/note= "Gonadotrophin releasing hormone epitope"
                                                                                                                                                                                                                                                                                                                                                                              "Tetanus toxoid sequence (947-967 aa)"
                                                                                                                                                                                                                                                                                                                                      11..16
/note= "Spacer peptide"
17..37
/note= "Tetanus toxoid s
                                                                                                                                                                                                                                                          Location/Qualifiers
            AAU11425 standard; peptide; 37 AA.
                                                                                           Synthetic immunogen peptide 6.
                                                                                                                                                                                                Chimeric - Clostridium tetani.
Chimeric - Mammalia.
Synthetic.
                                                                                                                                                                                                                                                                                   /label= OTHER
                                                                12-MAR-2002 (first entry)
                                                                                                                                                                                                                                                                      Misc-difference
                                                                                                                                                                                                                                                                                                                                                                                                          WO200185763-A2
                                     AAU11425;
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AAU11425
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APPLICANT: BAY, Sylvie

APPLICANT: ECLERC, Claude

APPLICANT: LO-MAN, Richard

TITLE OF INVENTION: MULTIPLE ANTIGEN GLYCOPEPTIDE CARBOHYDRATE, VACCINE

TITLE OF INVENTION: COMPRISING THE SAME AND USE THEREOF

TITLE OF INVENTION: COMPRESING THE SAME AND USE THEREOF

TITLE REPERENCE: 1341 US 3655

CURRENT APPLICATION NUMBER: US/09/405,986

CURRENT FILING DATE: 1999-09-27

EARLIER FILING DATE: 1997-03-27

NUMBER OF SEQ ID NOS: 3

SOFTWARE: Patentin Ver. 2.1
                                                                                                                                                                                          Gaps
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Best Local Similarity 100.0%; Pred. No. 1.4e-08;
Matches 21; Conservative 0; Mismatches 0;
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S6.0%; Score 112; DB 12;
Best Local Similarity 100.0%; Pred. No. 1.4e-08;
Matches 21; Conservative 0; Mismatches 0;
CURRENT APPLICATION NUMBER: US/09/785,215
CURRENT FILING DATE: 2001-02-20
NUMBER OF SEQ ID NOS: 19
SOFTWARE: Patentin version 3.1
SEQ ID NO 6
LENGTH: 21
                                                                                                                                                                                                                17 FNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                         RESULT 14
US-09-405-986-2
Sequence 2, Application US/09405986
Publication No. US20030157115A1
GENERAL INFORMATION:
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                                                                                                     ; ORGANISM: Clostridium tetani
US-09-785-215-6
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US-09-405-986-2
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US-10-223-809A-6
                                                                                             TYPE: PRT
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APPLICANT: Thomas, Lawrence J.

TITLE OF INVENTION: MODULATION OF CHOLESTERYL ESTER TRANSFER PROTEIN (CETP) ACTIVI
FILE REFRENCE: TCS-411.1D US-1; TCS-411.1D US-2
CURRENT APPLICATION UNMBER: US/09/943.548
CURRENT FILING DATE: 2001-08-30
PRIOR APPLICATION UNMBER: 08/432,483
PRIOR APPLICATION UNMBER: PCT/US96/06147
PRIOR FILING DATE: 1996-05-01
PRIOR FILING DATE: 1996-05-01
PRIOR FILING DATE: 1997-10-17
NUMBER OF SEQ ID NOS: 9
SOFTWARE: PATENTIN VETSION 3.1
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TITLE OF INVENTION: NOVEL METHOD FOR DOWN-REGULATION OF AMYLOID
FILE REFERENCE: 3631-0107P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Length 21;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     ch 56.0%; Score 112; DB 9; Length 21; Similarity 100.0%; Pred. No. 1.4e-08; 21; Conservative 0; Mismatches 0; Indels
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LOCATION: (1)..(21)

COTHER INFORMATION: Amino acid sequence 947-967 of Tetanus

COTHER INFORMATION: Toxoid Precursor (Tentoxylysin)

US-09-848-8348-4
                                                                                                                                                                                                                                                                                                                                                                                                                           ; OTHER INFORMATION: helper T cell epitope of tetanus toxin US-09-943-548-3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match 56.0%; Score 112; DB 9; Best Local Similarity 100.0%; Pred. No. 1.4e-08; Matches 21; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRICR APPLICATION NUMBER: 60/202,328
PRICR APPLICATION NUMBER: 60/202,328
NUMBER OF SEQ ID NOS: 20
SOFTWARE: Patentin version 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Sequence 4, Application US/09848834A Patent No. US20020076416A1 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             17 FNNFTVSFWLRVPKVSASHLE 37
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  APPLICANT: Rittershaus, Charles W.
                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ORGANISM: Tetanus bacillus
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Best Local Similarity
Matches 21; Conserv
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US-09-848-834A-4
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US-09-785-215-6
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                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 3
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 12; Length 1315;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 141, Application US/10241596
Publication No. US20030166238A1
APPLICANT: Microbiological Research Authority
                 CURRENT APPLICATION NUMBER: US/10/130,973A
CURRENT FILING DATE: 2002-10-21
PRIOR PELLING DATE: 2002-10-24
PRIOR FILING DATE: 2000-12-04
PRIOR FILING DATE: 1999-12-02
PRIOR FILING DATE: 1999-12-02
PRIOR FILING DATE: 2000-04-07
NUMBER OF SEQ ID NOS: 18
SOFTWARE: PATENTIN VEYSION 3.0
SEQ ID NO 16
LENGTH: 1112
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pred. No. 6.4e
1; Mismatches
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CURRENT FILING DATE: 2002-09-12
PRIOR APPLICATION NUMBER: US 09/255,829
PRIOR FILING DATE: 1999-02-23
PRIOR FILING DATE: 1999-02-23
PRIOR PLILING DATE: 1999-02-23
PRIOR PLILING DATE: 1997-08-23
PRIOR PPLICATION NUMBER: PCT/GB97/02273
PRIOR FILING DATE: 1997-08-22
PRIOR PLILING DATE: 1997-08-22
PRIOR APPLICATION NUMBER: US 08/782,893
PRIOR PLILING DATE: 1996-12-27
PRIOR APPLICATION NUMBER: GB 9625996.5
PRIOR PLILNG DATE: 1996-12-13
PRIOR PLILNG DATE: 1996-08-23
NUMBER: OF SEQ ID NOS: 175
                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: synthetic construct
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Patent No. US20020042364Al
GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                          ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SOFTWARE: PatentIn version 3.1
SEQ ID NO 141
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Best Local Similarity 95.5%;
Matches 21; Conservative
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US-10-241-596-141
FILE REFERENCE: 1581.0920000
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                                                                                                                                                                                                                                                                                                                                                  FEATURE:
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US-10-130-973A-17

| Sequence 17, Application US/10130973A | Sequence 17, Application US/10130973A | Sequence 17, Application US/20030147895A1 | Sequence 17, Application No. US20030147895A1 | Sequence 17, Application No. US20030147895A1 | Septimental INFORMATION: Sutton, John | APPLICANT: Sutton, John | APPLICANT: Silman, Nigel | TITLE OF INVENTION: CONStructs for Delivery of Therapeutic Agents to Neuronal Ce_1 | FILE REFERENCE: 1581.092000 | CURRENT FILING DATE: 2002-10-21 | PRIOR PLICATION NUMBER: DET/GB00/04644 | PRIOR FILING DATE: 1999-12-02 | PRIOR FILING DATE: 2000-04-07 | NUMBER OF SEQ ID NOS: 18 | SOFTHARE: PatentIn version 3.0
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APPLICANT: Sutton, John
APPLICANT: Silman, Migel
TITLE OF INVENTION: Constructs for Delivery of Therapeutic Agents to Neuronal Cel
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                                                                                                                                                                                                                                                                                                                                                                                                                                           Score 114; DB 12;
Pred. No. 4.3e-07;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            1; Mismatches
  CURRENT APPLICATION NUMBER: US/10/130,973A
                    CURRENT FILING DATE: 2002-10-21
PRIOR APPLICATION NUMBER: PCT/GB00/04644
PRIOR FILING DATE: 2000-12-04
PRIOR APPLICATION NUMBER: GB 9928530.6
PRIOR FILING DATE: 1999-12-02
PRIOR APPLICATION NUMBER: GB 008658.7
PRIOR FILING DATE: 2000-04-07
                                                                                                                                                                                                                                                                                                                                           ; FEATURE:
; OTHER INFORMATION: synthetic construct
US-10-130-973A-5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ; OTHER INFORMATION: synthetic construct US-10-130-973A-17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     681 MFNNFTVSFWLRVPKVSASHLE 702
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                                                                                                                                                                                           NUMBER OF SEQ ID NOS: 18
SOFWARE: Patentin version 3.0
SEQ ID NO 5
LENCTH: 907
                                                                                                                                                                                                                                                                                                                                                                                                                                           57.0%;
95.5%;
                                                                                                                                                                                                                                                                                                                    ORGANISM: Artificial Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21; Conservative
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Best Local Similarity
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US-10-130-973A-16
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LENGTH: 1052
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Sequence 3, Application US20030147895A1

Publication No. US20030147895A1

GENERAL INFORMATION:
APPLICANT: Shone, Clifford
APPLICANT: Silman, Nigel
TITLE OF INVENTION: Constructs for Delivery of Therapeutic Agents to Neuronal Cells
TITLE OF INVENTION: Constructs for Delivery of Therapeutic Agents to Neuronal Cells
FILE REFERENCE: 1581.0920000
CURRENT FILING DATE: 2002-10-21
PRIOR APPLICATION NUMBER: GP 9928530.6
PRIOR FILING DATE: 1999-12-02
PRIOR PILING DATE: 1999-12-02
PRIOR FILING DATE: 2000-04-07

NUMBER OF SEQ ID NOS: 18
SOFTHARE: PatentIn version 3.0
SEQ ID NO 3
LENTH: 882
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APPLICANT: Sutton, John
APPLICANT: Silman, Nigel
TITLE OF INVENTION: Constructs for Delivery of Therapeutic Agents to Neuronal Cells
FILE REFERENCE: 1581.0920000
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                 PRIOR APPLICATION NUMBER: PCT/GB00/04644
PRIOR FILING DATE: 2000-12-04
PRIOR FILING DATE: 2000-12-04
PRIOR FILING DATE: 1999-12-02
PRIOR PILING DATE: 1999-12-07
PRIOR APPLICATION NUMBER: GB 008658.7
NUMBER OF SEQ ID NOS: 18
SOFWARE: Patentin version 3.0
SEQ ID NO 9
LENGTH: 665
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ; OTHER INFORMATION: SYNTHETIC CONSTRUCT US-10-130-973A-3
                                                                                                                                                                                                                                                                                                                               ; OTHER INFORMATION: synthetic construct US-10-130-973A-9
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2002-10-21
                                                                                                                                                                                                                                                                                      ORGANISM: Artificial Sequence
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CURRENT FILING DATE:
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US-10-130-973A-3
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Sequence 9, Application US/10130973A
Publication No US20030147895A1
GENERAL INFORMATION:
APPLICANT: Shone, Clifford
APPLICANT: Sutton, John
APPLICANT: Silman, Nigel
APPLICANT: Silman, Nigel
FILLE OF INVENTION: Constructs for Delivery of Therapeutic Agents to Neuronal Cell
FILLE REFERENCE: 1581.0920000
CURRENT APPLICATION NUMBER: US/10/130,973A
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Pred. No. 2.8e-07;
1; Mismatches 0;
   TRANSYNAPTICALLY INTO THE CNS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Score 114; DB 11;
Pred. No. 2.1e-07;
1; Mismatches 0;
                     TILE REPERENCE: 03495, 0174-01000
CURRENT APPLICATION NUMBER: U5/09/816,467
CURRENT FILIC DATE: 2001-03-26
PRIOR APPLICATION NUMBER: 60/055,615
PRIOR PELING DATE: 1997-08-14
PRIOR APPLICATION NUMBER: 60/065,236
PRIOR PELING DATE: 1997-11-13
NUMBER OF SEQ ID NOS: 19
SOFTWARE: PATENTIN NOS: 2.1
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95.5%;
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1 Similarity 95.5%;
21; Conservative 1
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Best Local Similarity 95.5°
Matches 21; Conservative
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Best Local Similarity
         TITLE OF INVENTION:
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                                                                                                                                                                                                                                                                                                                                        463
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OTHER INFORMATION: Amino acid sequence 947-967 of the Tetanus toxoid precursor (Tent OTHER INFORMATION: oxylysin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of human OTHER INFORMATION: GARH Linked by a spacer to amino acid sequence 947-967 of the Tet OTHER INFORMATION: amus toxoid precursor (Tentoxylysin) protein linked by a spacer t OTHER INFORMATION: o amino acid sequence 2-10 of human Garn
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OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone NAME/KEY: PEPTIDE
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APPLICANT: PINZOLAS, ROSARIO OSTA
APPLICANT: BRULET, PHILIPPE
TITLE OF INVENTION: HYBRID PROTEINS THAT MIGRATE RETROGRADELY AND
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                                     Indels
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OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              LOCATION: (50)..(50)
OTHER INFORMATION: Amidated glycine or glycinemide
   100.0%; Pred. No. 3e-20;
tive 0; Mismatches 0;
                                                                                                                           2 HWSYGLRPGSSGPSLFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SEQ ID NO 18
LENGTH: 50
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                                                                                            2 HWSYGLRPGSSGPSLFNNFTVSFWLRVPKVSASHLE 37
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Patent No. US20020076416A1
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OTHER INFORMATION: Spacer peptide
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OTHER INFORMATION: Spacer peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ORGANISM: Artificial Sequence
Best Local Similarity 100. Matches 36; Conservative
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Hes 36; Conserv
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1 XHWSYGLRPGSSGPSLFNNFTVSFWLRVPKVSASHLE 37
GenCore version 5.1.6
Copyright (c) 1993 - 2003 Compugen Ltd.
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Maximum Match 100%
Listing first 45 summaries
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Gapop 10.0 , Gapext 0.5
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Maximum DB seq length: 200000000
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Perfect score:
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5: /cgn2_6/ptodata/2/pubpaa/USO6_PUBCOMB.pep:*
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7: /cgn2_6/ptodata/2/pubpaa/USO8_PUBCOMB.pep:*
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18: /cgn2_6/ptodata/2/pubpaa/USO0_NEW_PUB.pep:*
18: /cgn2_6/ptodata/2/pubpaa/USO0_NEW_PUB.pep:*
18: /cgn2_6/ptodata/2/pubpaa/USO0_NEW_PUB.pep:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Description	Sequence 14, Appl	Sequence 18, Appl	Sequence 2, Appli			Sequence 3, Appli	Sequence 5, Appli	17	Sequence 16, Appl	14	A	Sequence 4, Appli	•	2, 7	,
ID	US-09-848-834A-14	US-09-848-834A-18	US-09-816-467-2	US-10-130-973A-11	US-10-130-973A-9	US-10-130-973A-3	US-10-130-973A-5	US-10-130-973A-17	US-10-130-973A-16	US-10-241-596-141	US-09-943-548-3	US-09-848-834A-4	US-09-785-215-6	US-09-405-986-2	US-10-223-809A-6
BB .	6	σ	11	12	12	12	12	12	12	12	0	σ	10	12	12
% Query Match Length DB	37	50	463	605	665	882	907	1052	1112	1315	21	21	21	21	21
& Query Match	99.5	99.5	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	56.0	56.0	56.0	56.0	26.0
Score	199	199	114	114	114	114	114	114	114	114	112	112	112	112	112
Result No.	1	C4	e	4	S	ဖ	7	8	6	10	11	12	13	14	15

, 99, 10,	Sequence 20, Appl. Sequence 20, Appl. Sequence 12, Appl. Sequence 13, Appl. Sequence 13, Appl. Sequence 16, Appl.	Sequence 19, Appl Sequence 17, Appl Sequence 20, Appl Sequence 43, Appl Sequence 44, Appl Sequence 4, Appli	Sequence 9, Appli Sequence 4, Appli Sequence 6, Appli Sequence 2, Appli Sequence 1, Appli Sequence 4, Appli	Sequence 11, Appl Sequence 13, Appl Sequence 8, Appli Sequence 20, Appli Sequence 5, Appli Sequence 2, Appli
12 US-10-261-208-5 15 US-10-204-362-6 15 US-10-399-522-3 15 US-10-223-711-8 15 US-10-223-711-8 15 US-10-223-711-8	1110000		10 11 10 6 10 10 10 10 10 10 10 10 10 10 10 10 10	11 US-09-305-924-11 11 US-09-305-924-13 11 US-09-910-186A-8 12 US-10-241-596-20 11 US-09-305-924-5 8 US-08-981-087A-2
6.0 6.0 6.0 86.0 21 86.0 21 86.0			32.5 435 32.5 435 32.5 435 32.5 435 32.5 437 32.5 437	12.2 499 12.2 695 11.5 440 11.5 1169 10.5 169
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16 17 18 19 20	7.654335 7.654335	333558 333558 3310	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	44444 44444 012645

ALIGNMENTS

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Sequence 14, Application US/09848834A

Sequence 14, Application US/09848834A

Sequence 14, Application US/09848834A

Sequence 11, Application US/09848834A

Sequence 11, Application US/09848834A

SETTE OF INVENTION: Chimeric Peptide Immunogens
FILE REPERBRCE: 1102865-0047

CURRENT APPLICATION WUMBER: 020/05-05

CURRENT APPLICATION WUMBER: 00/202, 328

PRIOR FILING DATE: 2000-05-05

NUMBER OF SEQ ID NOS: 20

SOFTWARE: Patentin version 3.0

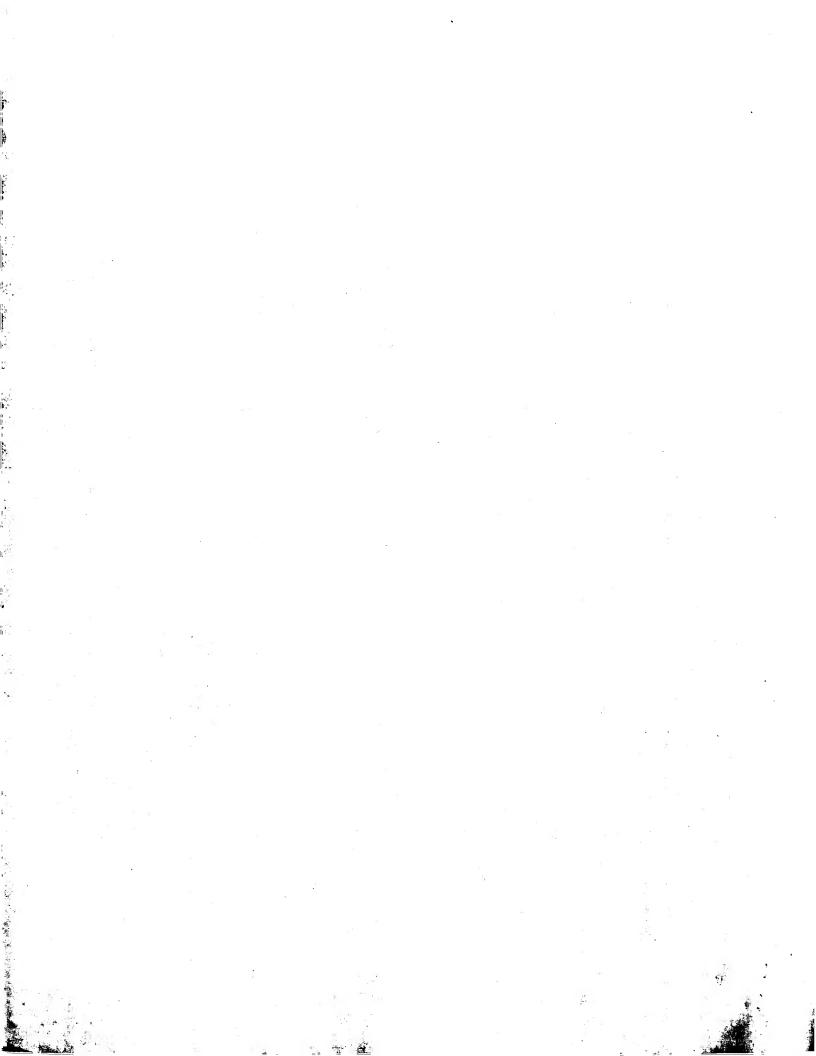
COTHER INFORMATION: Chimeric peptide ocnsisting of amino acid sequence 1-10 of the human GRRH hormone NAME/KEY: PEPTIDE

LOCATION: (1)...(1)

OTHER INFORMATION: Amino acid sequence 947-967 of the Tetanus toxoid precursor CHER INFORMATION: Amino acid sequence 947-967 of the Tetanus toxoid precursor 11 COTION 11 COTION 11 COTION 11 COTION 12 COTION 11 COTION 12 COTION 12 COTION 13 COTION 13 COTION 13 COTION 14 COTION 14 COTION 15 COTION 15
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99.5%; Score 199; DB 9; Length 37;

Query Match



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Search completed: September 24, 2003, 17:41:19 Job time : 6.96704 secs
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                                                                                                                                                                                                                                         This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@lsb-sib.ch).
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                                                                                                SCREAGE 234:1366-1371(1986).
-! FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS, IT STIMULATES
THE SECRETION OF BOTH LUTEINIZING AND FOLLICES-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Pfam; PF00446; GnRH; 1.
PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus; Placenta; Signal; Pyrrolidone carboxylic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AMIDATION (G-32 PROVIDE AMIDE GROUP). 1C0766FA4826E4D9 CRC64;
Mason A.J., Hayflick J.S., Zoeller R.T., Young W.S. III, Phillips H.S., Nikolics K., Seeburg P.H.; A deletion truncating the gonadotropin-releasing hormone gene is responsible for hypogonadism in the hpg mouse."; Science 234:1366-1371(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-0CT-1996 (Rel. 34, Created)
1-0CT-1996 (Rel. 34, Last sequence update)
28-FBB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor (Contains: Gonadoliberin I (LH-RH I)
Fulcinizing hormone-releasing hormone I) (Gonadotrophn-releasing hormone I) (GRH I) (Luliberin I); GRH-associated peptide I].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Euteleostomi;
Sus.
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PROLACTIN RELEASE-INHIBITING FACTOR
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MEDLINE-72114303; PubMed-4946067;
Baba Y., Matsuo H., Schally A.V.;
"Structure of the porcine LH- and FSH-releasing hormone. II.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PYRROLIDONE CARBOXYLIC ACID.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Length 90;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
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EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Sus scrofa (P1g).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata;
Mammalia; Eutheria; Cetartiodactyla; Suina; Suidae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    DB 1;
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                                                                                                                                                                           -!- SUBCELLUIAR LOCATION: Secreted.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                MGD; MGI:95789; Gnrh.
InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
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Submitted (MAY-1994) to the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29.08;
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Weesner G.D. Matter
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Best Local Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       90 AA;
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ACT_SITE
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    ID AC AC DE BOT 
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                                                                                                                                                                                                                                                                                                                                                                                                            "On the tryptophan residue in porcine LH and FSH-releasing hormone."; Biochem. Biophys. Res. Commun. 45:483-4871[97].
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES.
THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                        MEDLINE=72065376; PubMed-4942726; Matsuo H., Arimura A., Nair R.M.G., Schally A.V.; Synthesis of the porcine LH- and FSH-releasing hormone by the solid-bhase method.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            residues; Hormone; Amidation; Hypothalamus;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Gaps
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APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
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Confirmation of the proposed structure by conventional sequential
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Pred. No. 0.25;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            PYRROLIDONE CARBOXYLIC ACID
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                                                                                                                                                                                                                                                                 Biochem. Biophys. Res. Commun. 45:822-827(1971).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PROGONADOLIBERIN I.
                                                      Biochem. Biophys. Res. Commun. 44:459-463(1971).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; P
Placenta; Signal; Pyrrolidone carboxylic acid.
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InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
                                                                                                                                                                                                                                                                                                                                                                                    Baba Y., Arimura A., Schally A.V.;
                                                                                                                                                                                                                                                                                                                                                   MEDLINE=72117544; PubMed=4946275;
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33
10090 MW;
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                                                                                                                   SYNTHESIS OF GONADOLIBERIN.
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                                                        SEQUENCE FROM N.A.
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                                                                  TISSUE-Forebrain;
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                                 NCBI_TaxID=8355;
                                                                                                                                   metamorphosis.
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P13562;
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MOD_RES
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                                                                                                                                                                                                                                                               This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isp-sib.ch).
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                                                                                                                                                                          Jansen H.T., Stevens P.J., Zeitler P., Lehman M.N.;
Submitted (MAR-1997) to the EMBL/GenBank/DDBJ databases.
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES
THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    01-NOV-1995 (Rel. 32, Created)
01-NOV-1995 (Rel. 32, Last sequence update)
01-NOV-1995 (Rel. 41, Last annotation update)
38-FBB-2003 (Rel. 41, Last annotation update)
Gonadoliberin I precursor (Gonadotropin-releasing hormone I) (GnRH-I)
(LH-RH) (Luliberin I).
Xenopus laevis (African clawed frog).
                                                                                                                                                                                                                                                                                                                                                                                                   PRINTS; PR01541; GONADOLIBRNI.
PROSTIE; PS00473; GRNH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus;
Placenta; Pyrrolidone carboxylic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SIMILARITY).
AMIDATION (G-11 PROVIDE AMIDE GROUP) (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SIMILARITY).
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                   15-DEC-1998 (Rel. 37, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing
                                                                                                           Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Cricetinae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ó
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ACTIVITY (BY SIMILARITY).
PYRROLIDONE CARBOXYLIC ACID (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GNRH-ASSOCIATED PEPTIDE I (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Score 58; DB 1; Length 63;
Pred. No. 0.16;
0; Mismatches 0; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   FC94995676F77180 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ¥
                                                                                                                                                                                                                                            -!- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GONADOLIBERIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SIMILARITY)
                                                                                                Mesocricetus auratus (Golden hamster).
                                                                                                                                                                                                                                                                                                                                                                    InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
                                                                                                                                                                                                                                  SUBCELLULAR LOCATION: Secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                ö
          .5-DEC-1998 (Rel. 37, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    100.08;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         63
7370 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         29.0%;
                                                                                                                                                                                                                                                                                                                                                         EMBL; U91938; AAB51302.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                            >63
10
>63
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                                                                                     GNRHI OR GNRH OR LHRH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HWSYGLRPG 10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  HWSYGLRPG 10
                                                                                                                                                                                                                                                                                                                                                                                          Pfam; PF00446; GnRH;
                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Local Similarity
les 9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        63
63 AA;
                                                                                                                                            NCBI_TaxID=10036;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   10
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                14
                                                                                                                                                                                                                       HORMONES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GON1_XENLA
P45656;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NON_TER
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                               NON_TER
CHAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GON1_XENLA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Best Loc
Matches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GONADOTROPIN-RELEASING HORMONE ASSOCIATED
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             01-JAN-1990 (Rel. 13, Last sequence update)
28-FBB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
[Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GnRH I) (Lulliberin I); Prolactin release-inhibiting factor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        EMBL; L28040; AAA49728.1; -.
PIR; 151423: 151423.
InterPro; IPR002012; GRRH.
InterPro; IPR004079; GonadoliberinI.
Pfam; PF00446; GRRH; 1.
PROMATE; PR00473; GNRH: 1.
PROSITE; PS00473; GNRH: 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gaps
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AMIDATION (G-34 PROVIDE AMIDE GROUP).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Amphibia; Batrachia; Anura; Mesobatrachia; Pipoidea; Pipidae;
Xenopodinae; Xenopus.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mus musculus (Mouse).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 .
0
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                                                                                                                                                                                                       MEDLINE-94185563; PubMed-8137750;
Hayes W.P., Wray S., Battey J.F.;
"The frog gonadotropin-releasing hormone-I (GnKH-I) gene has
                                                                                                                                                                                                                                                                                           mammalian-like expression pattern and conserved domains in GnRH-associated peptide, but brain onset is delayed until
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Length 89;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              0; Indels
                                                                                                                                                                                                                                                                                                                                                                             6F4F36FBAE0D4284 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       DB 1;
0.24;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Æ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    29.0%; Score 58; DB 100.0%; Pred. No. 0.2 ive 0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Signal; Pyrrolidone carboxylic acid.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          [1]
SEQUENCE FROM N.A.
MEDLINE=87069928; PubMed=3024317;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-JAN-1990 (Rel. 13, Created)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10246 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Query Match 29.0
Best Local Similarity 100.
Matches 9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          89
89
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                                                                                                                                                                                                                                                                                                                                                                                                                                                            Burgus R., Butcher M., Amoss M., Ling N., Monahan M., Rivier J.,
Fellows R., Blackwell R., Vale W., Guillemin R.;
Fellows R., Blackwell R., Vale W., Guillemin Pormone-
releasing factor (LRF) (LH-hypochalamus-LRF-gas chromatography-mass
spectrometry-decapeptide-Edman degradation).";
Froc. Natl. Acad Sci. U.S.A. 69:278-282(1972).
The SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATES
THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus;
Placenta; Pyrrolidone carboxylic acid.
NON_TER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                   Ovis aries (Sheep).
Ovis aries (Sheep).
Eukaryota: Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi;
Mammalia; Eutheria; Cetartiodactyla; Ruminantia; Pecora; Bovoidea;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PYRROLIDONE CARBOXYLIC ACID.
AMIDATION (G-11 PROVIDE AMIDE GROUP).
                   15-DEC-1998 (Rel. 37, Created)
15-DEC-1998 (Rel. 37, Last sequence update)
18-PEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor (Contains: Gonadoliberin I (LH-RH I)
(Lutelnizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 61;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
                                                                                                                                                                                                                                                                                                                  SEQUENCE OF 12-61 FROM N.A. STRALM-Western range; TISSUB-Hypothalamus; STRALM-Western range; TISSUB-Hypothalamus; Rodriguez R.E., Wise M.E., Submitted (OCT-1993) to the EMBL/GenBank/DDBJ databases.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         63962A1AE319B8F0 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1;
0.16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Š
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -!- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              100.0%; Preu. ...
0; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                63
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 58;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL; U02517; AAA03433.1; -.
InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
Pfam: PF00446; GnRH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SUBCELLULAR LOCATION: Secreted.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                         SEQUENCE OF 1-10.
MEDLINE=72094314; Pubmed=4550508;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         6828 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  29.0%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           9; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         >61
10
>61
                                                                                                                                                  (Fragment).
GNRH1 OR GNRH OR LHRH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      10
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 AA;
                                                                                                                                                                                                                                                                             NCBI_TaxID=9940;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GON1_MESAU
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ACT_SITE
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MOD_RES
NON_TER
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                                                                                                                                                                                                                                                                                                                                                                                                                                      This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are or estrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                Nat. Genet. 23:373-373(1999).
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES
THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                           Characterization of single-nucleotide polymorphisms in coding regions
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus; Placenta; Pharmaceutical; Signal; Polymorphism;
Signal: 1 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GO, GO:0005625; C:soluble fraction; TAS.
GO: GO:0005183; F:luteinizing hormone-releasing factor activity; TAS.
GO: GO:0007267; P:cell-cell signaling; TAS.
GO: GO:0007275; P:development; TAS.
GO: GO:0001285; P:negative regulation of cell proliferation; TAS.
GO: GO:000165; P:signal ransduction; TAS.
InterPro; IPR004079; GonadoliberinI.
Pfam; PF0046; GARH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Gaps
                                                                                                                      ERRATUM.
Cargill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N., Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Ziaugra L. Friedland L., Rolfe A., Warrington J., Lipshutz R., Daley G.Q.,
                                                                                                                                                                                                                                                                                                                                     PHARMACEUTICAL: Available under the names Factrel (Ayerst Labs),
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          AMIDATION (G-34 PROVIDE AMIDE GROUP).
W -> S (IN dbSNP:6185).
                                                                                                                                                                                                                                                                                                                                                         Lutrepulse or Lutrelef (Ferring Pharmaceuticals) and Relisorm
  Rolfe A., Warrington J., Lipshutz R., Daley G.Q.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        5;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               DB 1; Length 92;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      30A72221B076FA79 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PROGONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       GONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /FTId=VAR_013943
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Pred. No. 0.18;
3; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         61 AA.
                                                                                                                                                                                                                                                                                                                                                                                                    -! - SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 59;
                                                                                                                                                                                                                                                                                                                  SUBCELLULAR LOCATION: Secreted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRT;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               HWSYGLRPGS--SGPSLFNNF 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     EMBL; X01059; CAA25526.1; -. EMBL; M12578; AAA35916.1; -. EMBL; X15215; CAA33285.1; -. PIR; S05308; RHUG.
                                                                                 Nat. Genet. 22:231-238(1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              52.48;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HGNC:4419; GNRH1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 92
92
26
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es 11; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      92 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       24
33
16
                                                                human genes.
Friedland L.,
                                                                                                                                                                                                            Lander E.S.;
Nat. Genet.
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ACT_SITE
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                                                                                                                                                                                                                                                                                                                                                                                                                        1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Neuroendocrinology 60:346-359(1994).
-!- FUNCTION: STIMULATES THE SECRETION OF GONADOTROPINS; IT STIMULATES
THE SECRETION OF BOTH LUTEINIZING AND FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRINTS; PRO1541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus; Signal; Pyrrolidone carboxylic acid.
                              Amidation; Hypothalamus;
                                                                                                                                                                                                                                              SIMILARITY).
AMIDATION (G-34 PROVIDE AMIDE GROUP) (BY
                                                                                                                                                                                                                                                                                                                                                                                                                        Gaps
                                                                                                                       GONADOLIBERIN I.
GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ma Y J., Costa M.E., Ojeda S.R.; "Developmental expression of the genes encoding transforming growth factor alpha and its receptor in the hypothalamus of female rhesus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-OCT-1996 (Rel. 34, Created)
01-OCT-1996 (Rel. 34, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor (Contains: Gonadoliberin I (LH-RH I)
(Lutelnizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
                                                                                                                                                                                                                                                                                                                                                                                                                      5
                                                                                                                                                                                                                       PYRROLIDONE CARBOXYLIC ACID (BY
                                                                                                                                                                                                                                                                                                                                                                     Score 60; DB 1; Length 92; Pred. No. 0.13;
                                                                                                                                                                                                                                                                                                                                                                                                                      4; Indels
                                                                                                                                                                                                                                                                                              SIMILARITY).
4FDBF2C58CF5F63B CRC64;
                                                                                                PROGONADOLIBERIN I.
                                                     carboxylic acid.
BY SIMILARITY.
                              residues; Hormone;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      67 AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       -!- SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                      4; Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        GonadoliberinI.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 20
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              MEDLINE-95124501; PubMed-7545971;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Macaca mulatta (Rhesus macaque).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2 HWSYGLRPGS -- SGPSLFNNF
                                                     Pyrrolidone
                                                                                                                                                                                                                                                                                                                   10197 MW;
                                                                                                                                                                                                                                                                                                                                                                   30.0%;
52.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      EMBL; S75918; AAB33096.1; -.
PS00473; GNRH; 1.
on pair of basic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PIR; 178541; 178541.
InterPro; IPR002012; GnRH.
InterPro; IPR004079; Gonad
                                                                                                                                                                                                                                                                                                                                                                   Query Match 30.0
Best Local Similarity 52.4
Matches 11; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STANDARD;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Cercopithecinae; Macaca
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Pfam; PF00446; GnRH; 1.
                                                                                 24
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TISSUE-Hypothalamus;
                                on pair of
                                                  Placenta; Signal;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                     92 AA;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   GON1_MACMU P55247;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Fragment)
                                                                                                                                              PEPTIDE
ACT_SITE
                                Leavage
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                                                                                                                                                                                                                                                                                                                     SEQUENCE
     PROSITE;
                                                                                                                         PEPTIDE
                                                                                                                                                                                                                     MOD_RES
                                                                                                                                                                                                                                                                       MOD_RES
                                                                            SIGNAL
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GON1_MACMU
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"Isolation of the gene and hypothalamic cDNA for the common precursor of gonadotropin-releasing hormone and prolactin release-inhibiting factor in human and rat.";
Proc. Natl. Acad. Sci. U.S.A. 83:179-183(1986).
                                                                                                                     SIMILARITY).
AMIDATION (G-16 PROVIDE AMIDE GROUP) (BY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Hayflick J.S., Adelman J.P., Seeburg P.H.; The complete nucleotide sequence of the human gonadotropin-releasing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    VAKIANT SER-16.
MEDLINE-99318093; Pubmed-10391209;
Cargill M., Altshuler D., Ireland J., Sklar P., Ardlie K., Patil N.,
Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., Nemesh J., Zlaugra L.,
                                                                                                                                                                                                                                                 Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Seeburg P.H., Adelman J.P.;
"Characterization of CDNA for precursor of human luteinizing hormone
                                                         GNRH-ASSOCIATED PEPTIDE I.
APPEARS TO BE ESSENTIAL FOR BIOLOGICAL
ACTIVITY (BY SIMILARITY).
PYRROLIDONE CARBOXYLIC ACID (BY
                                                                                                                                                                                                                                                                                                                                                                                                      21-JUL-1986 (Rel. 01, Created)
01-APR-1988 (Rel. 07, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
[Luteinlizing hormone-releasing hormone I) (Gonadocropin-releasing hormone I) (GORH I) (Luliberin I) (Gonadorellin); GRH-associated peptide I).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Homo sapiens (Human).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.
                                                                                                                                                                                                                                                5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         "The chemical identity of the immunoreactive LHRH-like peptide
                                                                                                                                                                                                                 Score 59; DB 1; Length 67; Pred. No. 0.13;
                                                                                                                                                                                                                                                Indels
                                                                                                                                                                                     505394DAA261A3F2 CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      biosynthesized in the human placenta.";
Biochem. Biophys. Res. Commun. 109:1061-1071(1982)
                                                                                                                                                                                                                                                5.
                             PROGONADOLIBERIN I. GONADOLIBERIN I.
                                                                                                                                                                                                                                                                                                                                                                                         92 AA.
                SIMILARITY.
                                                                                                                                                                                                                                                3; Mismatches
                                                                                                                                                      SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             [3]
SEQUENCE FROM N.A., AND VARIANT SER-16.
MEDLINE-85012739; Pubmed-6090951;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         hormone gene.";
Nucleic Acids Res. 17:6403-6403(1989).
                                                                                                                                                                                                                                                                               2 HWSYGLRPGS--SGPSLFNNF 20
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        [2]
SEQUENCE FROM N.A.
MEDLINE-86094338; Pubmed-2867548;
MEDLINE-86094338.
                                                                                                                                                                                                                                                                                                 7 HWSYGLRPGGKRDAENLMDSF 27
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Tan L., Rousseau P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=89366682; PubMed=2671939;
                                                                                                                                                                                                                  29.5%;
52.4%;
                                                                                                                                                                                     7573 MW;
                                                                                                                                                                                                                                                   Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nature 311:666-668(1984).
                                                                                                                                                                                                                                                                                                                                                                                           STANDARD;
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>67
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>67
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  GNRH1 OR GNRH OR LHRH.
                                                                                                                                                                                                                                 Local Similarity
les 11; Conserv
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                                                                                                                                                                                     67 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 releasing hormone.
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P01148;
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METAL
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       Qy
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"Organization and phylogenetic interrelationships of genes encoding components of the botulinum toxin complex in proteolytic Clostridium components of the botulinum toxin complex in proteolytic Clostridium toxin botulinum types A, B, and F: evidence of chimeric sequences in the gene encoding the nontoxic nonhemagglutinin component.";
Int. J. Syst. Bacteriol. 46:1107-112(1996).

-! FUNCTION: Inhibits acetylcholine release. The botulinum toxin binds with high affinity to peripheral neuronal presynaptic membrane, is then internalized by receptor-mediated endocytosis. The C-terminus of the heavy chain (H) is responsible for the adherence of the toxin to the call surface while the N-terminus confidence translocation, the light chain (L) hydrolyzes the 197-Gln-1-Arg-198 bond in SNAP-25, thereby blocking neurotransmitter release. Inhibition of acetylcholine release.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an enail to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              the Swiss Institute of Bioinformatics and the EMBL outstation
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   There are no restrictions on ng as its content is in no
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. No detected action on small molecule substrates.
    Gaps
                                                                                                                                                                                                                        045894; P77780;
28-FBB-2003 (Rel. 41, Created)
28-FBB-2003 (Rel. 41, Last sequence update)
28-FBB-2003 (Rel. 41, Last annotation update)
Botulinum neurotoxin type A precursor (EC 3.4.24.69) (BONT/A)
(Bontoxilysin A) (BOTOX) (Contains Botulinum neurotoxin A, light-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUBUNIT: Disulfide-linked heterodimer of a light chain (L) and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         -1- MISCELLANEOUS: There are seven antigenically distinct forms of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Willems A., East A.K., Lawson P.A., Collins M.D.; "Sequence of the gene coding for the neurotoxin of Clostridium botulinum type A associated with infant botulism: comparison with
                                                                                                                                                                                                                                                                                                                                                                                     BOTA OR BNA OR ATX.
Clostridium botulinum.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               CATALYTIC ACTIVITY: Limited hydrolysis of proteins of the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   botulinum neurotoxin: Types A, B, Cl, D, E, F, and G. -! - SIMILARITY: BELONGS TO PEPTIDASE FAMILY M27.
    Indels
  10;
                                                                                                                                                                                                                                                                                                                                                                       Botulinum neurotoxin A, heavy-chain].
                                                                                                                                                                                                            PRT; 1295 AA
  Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   bean Bioinformatics Institute. The non-profit institutions as long
                                                                         11 SSGPSLFNNFTVSFWLRVPKVSASHLE 37
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            heavy chain (H) (By similarity).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Res. Microbiol. 144:547-556(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       MEDLINE=94143603; PubMed=8310180;
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  9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    clostridial neurotoxins.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            failure (By similarity)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE OF 1-65 FROM N.A.
Conservative
                                                                                                                                                                                                            STANDARD;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=1491;
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  11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                               Clostridium
                                                                                                                                                                                                            BXA2_CLOBO
                                                                                                                                                                                                                                                                                                                                                                         chain;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    other
                                                                                                                                                                                    BXA2_CLOBO
Matches
                                                                                                                                                               RESULT 7
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This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation-the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (see http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GONADOTROPINS; IT STIMULATES FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gaps
                                                                                                  Probom; PD001963; Bontoxilysin; 1.
PROSITE; PS00142; ZINC_PROTEASE; FALSE_NEG.
Neurotoxin; Transmembrane; Hydrolase; Metalloprotease; Zinc.
NITT_MET 0 0 BY SIMILARITY.
CHAIN 1 447 BOTULINUM NEUROTOXIN A, LIGHT-CHAIN.
CHAIN 448 1295 BOTULINUM NEUROTOXIN A, HEAVY-CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             28-FEB-2003 (Rel. 41, Last annotation update) recognadoliberin I precursor (Contains: Gonadoliberin I (LH-RH I) (Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GRRH 1) (Luliberin I); GRRH-associated peptide I].
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Tupaia glis belangeri (Common tree shrew).
Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;
Mammalia; Eutheria; Scandentia; Tupaiidae; Tupaia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "Characterization of two new preproGNRH mRNAs in the tree shrew:
first direct evidence for mesencephalic GNRH gene expression in
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ö
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MEDLINE-97079639; PubMed-8921350;
Kasten T.L., White S.A., Norton T.T., Bond C.T., Adelman J.P.,
                                                                                                                                                                                                                                                      ZINC (CATALYTIC) (BY SIMILARITY).
BY SIMILARITY.
                                                                                                                                                                                                                                                                                                            ZINC (CATALYTIC) (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Score 62; DB 1; Length 1295;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Indels
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BY SIMILARITY.
POTENTIAL.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        , Last sequence update)
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6; Mismatches
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-!- FUNCTION: STIMULATES THE SECRETION OF
THE SECRETION OF BOTH LUTEINIZING AND
                                                                                                                                                                                                                                                                                                                                                                                                               POTENTIAL
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Interpro; IPR004079; GonadoliberinI.
Pfam; PF00446; GnRH; OPRINT; PR01541; GONADOLIBRNI.
MEROFS; M77.002; -.
InterPro; IPR000395; Bontoxilysin.
InterPro; IPR006025; Zn_MTpeptdse.
Pfam; PF01742; Peptidase. M77; 1.
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Q95335;
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16, Appl 15, Appl 13, Appl 13, Appl 11, Appl 10, Appl 10, Appl 10, Appl 10, Appl 11, Appl 5, Appl 5, Appl 41, Appl 41, Appl 21, Appl 11, A

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Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       greater than or equal to the score of the result being derived by analysis of the total score distribution
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q length:
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1: /cgn2_6/ptodata/1/1aa/5A_COMB.pep:*
2: /cgn2_6/ptodata/1/1aa/5B_COMB.pep:*
3: /cgn2_6/ptodata/1/1aa/6A_COMB.pep:*
4: /cgn2_6/ptodata/1/1aa/6B_COMB.pep:*
5: /cgn2_6/ptodata/1/1aa/PCTUS_COMB.pep:*
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FNNFTVSFWLRVPKVSASHLEGPSLHWSYGLRPX 34
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(without alignments)
142.750 Million cell updates/sec
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US-08-446-692-14
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                                                                                                            Query Match
Best Local
                                                                                           Matches
                                                                                                                                                                                                                                                            TELEFAX: (516)751-6849
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
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CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/446,692
FILING DATE: 7-UN-1995
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ZIP: 10154-0053
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CORRESPONDENCE ADDRESS:
ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
CITY: New York
STATE: NY
                                                                                                                                                                                                                                                                                                                REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)415-8745
                                                                                                                                                                                                                                                                                                                                                                    ATTORNEY/AGENT INFORMATION:
NAME: Maria C.H. Lin
REGISTRATION NUMBER: 29,323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
NUMBER OF SEQUENCES: 114
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COMPUTER: IBM PC compatible OPERATING SYSTEM: PC-DOS/MS-DOS
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                                      1 FNNETVSFWLRVPKVSASHLEGPSLHWSYGLRP 33
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87.9%;
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US-08-913-880C-12
US-08-913-880C-13
US-08-913-880C-12
US-08-913-880C-11
US-08-913-880C-11
US-08-913-880C-11
US-08-913-880C-1
US-08-913-880C-1
US-08-448-992-5
US-08-448-351A-5
US-08-488-351A-5
US-09-100-409A-41
PCT-US95-13841-8
US-07-610-525-3
US-08-319-704-11
US-08-319-704-13
US-07-610-525-3
US-07-610-525-3
US-07-610-525-3
US-07-610-525-3
US-07-610-525-3
                                                                                         Score 152; DB Pred. No. 1.6e 0; Mismatches
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nes 0;
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                                                                       Sequence 1, Application US/07610525 Patent No. 5196512 GENERAL INFORMATION:
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GENERAL INFORMATION:
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Best Local Similarity
                                                                                                                                                                                                                                                                                Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COUNTY: 10154-002
ZIP: 10154-002
COMPUTER READABLE FORM:
COMPUTER: FROM PC COMPAILIBLE
COMPOUTER: IBM PC COMPAILIBLE
COMPOUTER: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                              TELEFAX: (516)751-6849
INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/446,692
EILING DATE: 7-JUN-1995
CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/229,275
EILING DATE: 14-APR-1994
                    APPLICANT:
APPLICANT:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT: Ladd, Anna
APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stimulators for vaccines
NUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS:
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE CHARACTERISTICS:
LENGTH: 32 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TELECOMMUNICATION INFORMATION: TELEPHONE: (212)415-8745
TELEFAX: (516)751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          CLASSIFICATION: 424
PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/057,166
FILING DATE: 27-APR-1992
CLASSIFICATION: 424
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: PatentIn Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/488,351A
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
         TITLE OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME: Maria C.H. Lin
REGISTRATION NUMBER: 29,323
                                                                                                                                                                                                                                                                                                                                                                                          TOPOLOGY:
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CITY: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                          LENGTH:
                                                                                                                                                                                                                                                                                29;
INVENTION: SYNTHETIC PEPTIDES USEFUL AS
                                                                                                                                                                                                                                          FNNFTVSFWLRVPKVSASHLEGPSLHWSYGLRP 33
                                                                                                                                                                                                                                                                                                                                                                                                         amino acid
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87.9%;
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Pred. No. 1.6e-15;
Pred. No. 1.6e-15;
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US-08-661-052-12
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INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                               APPLICANT: YASHWAUL....
APPLICANT: Joel Goldstein
APPLICANT: Graziano
APPLICANT: Chezian Somasundaram
APPLICANT: Chezian Somasundaram
TITLE OF INVENTION: THERAPEUTIC COMPOUNDS COMPRISED
TITLE OF INVENTION: OF ANTI-FC RECEPTOR ANTIBODIES
                                                                        COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
            FILING DATE:
PRIOR APPLICATION DATA:
APPLICATION NUMBER:
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MEDIUM TYPE: Floppy disk
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                                                                                                                                                                                                                     STREET: 60 S
CITY: Boston
                                                           APPLICATION NUMBER:
                                                                                                                                                                                    COUNTRY:
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CLASSIFICATION:
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SOFTWARE: PatentIn Release #1.24
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5837243
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AMINO ACID
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                                                                                                                                                                                      USA
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SYSTEM: PC-DOS/MS-DOS
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07-JUNE-1995
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100.0%;
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                SD
                                                           US/08/661,052
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            08/484,172
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Pred. No. 6.8e-1
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Matches
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GENERAL INFORMATION:
                                                                 Matches
                                                                             Query Match
Best Local 9
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                                                                                                                                                                                                     TELEFAX: (216) 241-0816: INFORMATION FOR SEQ ID NO: 8: SEQUENCE CHARACTERISTICS: LENGTH: 21 amino acids
                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
COMPUTER: PERM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/460,502
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               APPLICANT: Bakaletz, Lauren O.
APPLICANT: Kaumaya, Parvín T.
TITLE OF INVENTION: Synthetic Chimeric Fimbrin Peptides
NUMBER OF SEQUENCES: 11
                                                                                                                                                                                                                                                                 REFERENCE/DOCKET NUMBER: 22
TELECOMMUNICATION INFORMATION:
TELEPHONE: (216) 622-8458
                                                                                                                                                                                                                                                                                                               FILING DATE:
CLASSIFICATION: 424
CTASSIFICATION: 424
ATTORNEY AGENT INFORMATION:
NAME: GOliick, Mary E.
REGISTRATION NUMBER: 34,8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS
LENGTH: 21 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TELECOMMUNICATION INFORMATION: TELEPHONE: (617)227-7400
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ATTORNEY/AGENT INFORMATION: NAME: Arnold, Beth E.
                                                                                                                                                   TYPE: STRANDEDNESS: SIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: Cleveland
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         STREET:
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FUNFTVSFWLRVPKVSASHLE 21
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                                                              Conservative
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internal
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                                                           60.2%; Score 112; 100.0%; Pred. No. tive 0; Mismatc
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                                                              Mismatches
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                                                                                                                                                                                                           Patent No. 6153728
GENERAL INFORMATION:
                                                                                                                                                                                                                             Sequence 5, Application US/09089595 Patent No. 6153728
                                                                                                                                                                                                                                                                                                                                                                                                          Matches
                                                                                                                                                                                                                                                                                                                                                                                                                          Query Match
Best Local 9
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TITLE OF INVENTION:
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                        APPLICANT:
APPLICANT:
                             NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       TELECOMMUNICATION INFORMATION: TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CLASSIFICATION: 530
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SOFTWARE: Wordperfect CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
                                                                                        TITLE OF INVENTION:
                                                                                                                       TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    APPLICANT:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NAME: Hanson, No. 5908778man D. REGISTRATION NUMBER: 30,946
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            COMPUTER: IBM
OPERATING SYSTEM: PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        STREET: 805 Third Avenue CITY: New York City STATE: New York
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            APPLICATION NUMBER: US/08/724,774B FILING DATE: 03-October-1996
   CITY:
                  STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          COUNTRY:
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New York City
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                    805 Third Avenue
                                                                                                                                                        Rimoldi, Donata; Jongeneel, Victor; Coulie, Pierre; Cerrottini, Jean-Charles; Carrel, Stefan; Reed, Daryl
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (212) 838-3884
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          USA
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Diskette, 3.5 inch, 144 kb storage
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                                                                                      MAGE-10 ENCODING cDNA, The Tumor Rejection Antigen Precuros Mage-10, Antibodies Specific To The Molecule, Uses Thereof
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Uses Thereof
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                                                                                                                                                                                                                                                                                                                                                                                                                        60.2%; Score 112; 100.0%; Pred. No.
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GENERAL INFORMATION:
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Best Local 9
                          APPLICATION NUMBER: US 08/724,
APPLICATION NUMBER: US 08/724,
APPLICATION: 03-October-1996
CLASSIFICATION: 435
ATTORNEY/AGENT INFORMATION:
NAME: Schofield, Mary Anne
REGISTRATION NUMBER: 36,669
REGISTRATION NUMBER: 36,669
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TELEFAX: (212) 838-3884 INFORMATION FOR SEQ ID NO:
                                                                                                                                                    APPLICATION NUMBER: US/09/382,855
FILING DATE: 25-August-1999
PRIOR APPLICATION UNMBER: US 09/089,595
FILING DATE: 02-June-1998
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                         OPERATING SYSTEM: PC-DOS
SOFTWARE: Wordperfect
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  APPLICANT: Rimoldi, Donata; Jongeneel, Victor; Coulie, Pierre; APPLICANT: Cerrottini, Jean-Charles; Carrel, Stefan; Reed, Daryl TITLE OF INVENTION: MAGE-10 ENCODING cDNA, The Tumor Rejection TITLE OF INVENTION: Antigen Precuros Mage-10, Antibodies Specific
                                                                                                                                                                                                                                                                                                                                                        COMPUTER READABLE FORM: MEDIUM TYPE: Diskette,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Hanson, No. 6153728man D.
REGISTRATION NUMBER: 30,946
REFERENCE/DOCKET NUMBER: LUD 54
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212) 688-9200
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US 08/72.
FILING DATE: 03-October-1996
ATTORNEY/AGENT INFORMATION:
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                                                                                                                                                                                                                                                                                                                                                                                                                                      ADDRESSEE: Fulbright & Jaworski LLP
STREET: 666 Fifth Avenue
CITY: New York City
STATE: New York
                                                                                                                                                                                                                                                                                                                                          COMPUTER:
                    REFERENCE/DOCKET NUMBER:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OPERATING SYSTEM: PC-DOS
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INFORMATION:
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                                                                                                                                    US 08/724,774
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                                                                                                                                                                                                                                                                                                                                                        3.5 inch,
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                  LUD 5457.2 DIV - JEL/MAS
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RESULT 10
US-09-188-082-12
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                                                                                                                                                                                                                                                                                            Sequence 12, Application US/09188082 Patent No. 6270765
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Query Match
Best Local :
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SEQ ID NO 5
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Matches
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                                                                                                                                                                            GENERAL INFORMATION:
APPLICANT: Yashwant M. Deo
APPLICANT: Joel Goldstein
APPLICANT: Robert Graziano
APPLICANT: Chezian Sommasundaram
TITLE OF INVENTION: THERAPEUTIC COMPOUNDS COMPRISED
TITLE OF INVENTION: OF ANTI-FC RECEPTOR ANTIBODIES
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Query Match
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CURRENT FILING DATE: 1998-10-30
PRIOR APPLICATION NUMBER: US 08/724,774
PRIOR FILING DATE: 1996-10-03
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TITLE OF INVENTION:
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TELEFAX: (212) 752-5958
INFORMATION FOR SEQ ID NO: 5:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              FILE REFERENCE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              APPLICANT:
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TYPE: PRT
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FEATURE:
                                                                                                                               NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
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                                                                  COUNTRY:
                                                                                                 CITY: Boston
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TYPE: amino acid
'inear
                                                                                                                  STREET:
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                                                                                  Massachusetts
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Rimoldi, Donata
                                                                                                                60 State Street, Suite 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Boon-Falleur, Thierry
                                                                   USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                          Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                        60.2%; Score 112; DB 3; 100.0%; Pred. No. 6.8e-10;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
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OPERATING SYSTEM: PC-DOS/MS-DOS

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RESULT 11
US-09-171-969-10
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; FRAGMENT TYPE:
US-09-188-082-12
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence 10,
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Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: 12:
                                                                              REFERENCE/DOCKET NUMBER: INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                           APPLICATION NUMBER: US/09/171,969
FILING DATE: 01 May 1997 (01.05.97)
CLASSIFICATION: 514
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 08/640,713
FILING DATE: 01 May 1996 (01.05.96)
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                               COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: LBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                NUMBER OF SEQUENCES: 1
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE CHARACTERISTICS:
LENGTH: 21 amino acids
                                           SEQUENCE CHARACTERISTICS:
LENGTH: 21 amino acids
                                                                                                                                              APPLICATION NUMBER: 08/802,967
FILING DATE: 21 February 1997 (21.02.97)
ATTORNEY/AGENT INFORMATION:
                                                                                                                                                                                                                                                                                                               SOFTWARE: WordPerfect 6.1 CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Thomas, Lawrence J.
TITLE OF INVENTION: PLASMID-BASED VACCINE FOR TREATING ATHEROSCLEROSIS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         APPLICATION NUMBER: US/09/188,082 FILING DATE: PRIOR APPLICATION DATA:
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OLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TORNEY AGENT PORT REGISTRATION NUMBER: 35,430
REGISTRATION NUMBER: MXI-043CP
                                                                                                             REGISTRATION NUMBER:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   CITY: Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TOPOLOGY:
               TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                  COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  STREET:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     LENGTH:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    ADDRESSEE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                    02109-1807
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     0, Application US/09171969 6284533
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     amino acid
                                                                                                                              Leon R. Yankwich
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      FNNFTVSFWLRVPKVSASHLE 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                 Massachusetts
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 E: Banner & Witcoff, Ltd.
75 State Street, Suite 2300
                                           21 amino acids
                                                                                                                                                                                                                                                                                                                                                                                                                                  USA
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(617)227-5941
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internal
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                                                                                                             30,237
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                                                                                             TCS 414.1 PCT (05872)
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Pred. No.
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; TYPE: amino acid
; TOPOLOGY: linear
; MOLECULE TYPE: pepti
; FRAGMENT TYPE: inter
US-09-364-088-12
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; LOCATION:
US-09-171-969-10
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; Patent No. 6365161; Patent INFORMATION:
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                                                                         Query Match
Best Local (
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Best Local
                                                             Matches
                                                                                                                                                                                                          TELEFAX: (617)742-7414
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                     REGISTRATION NUMBER: 38,872
REFERENCE/DOCKET NUMBER: MXI-043CP2
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
TELEPAX: (617)742-7414
                                                                                                                                                                                                                                                                                                                FILING DATE: 07-JUNE-199
ATTORNEY/AGENT INFORMATION:
NAME: Remillard, Jane E.
                                                                                                                                                                                                                                                                                                                                                                            PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 09/188,082
FILING DATE: 07-70HE-1996
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER: IBM PC COMPATIBLE
OPERATING SYSTEM: PC-DOS/MS-DOS
SOTTWARE: Patentin Release #1.0,
CURRENT APPLICATION DATA:
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      NUMBER OF SEQUENCES: 16
CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD, ILP
STREET: 28 State Street, 24th Floor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       ANTI-SENSE: FEATURE:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 TITLE OF INVENTION:
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                                                                                                                                                                                                                                                                                                                                                APPLICATION NUMBER: US 01 FILING DATE: 07-JUNE-1995
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CITY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/09/364,088
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                                                                                                                                                                                             LENGTH:
21;
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                                                        Similarity 100.
21; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Similarity
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                                                                                                                                                                                               21 amino acids
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                                                                                                                                   internal
                                                                                                                                                   peptide
                                                      100.08; F
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                                                                         Score 112;
Pred. No.
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; Pred. No.
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                                                           Mismatches
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                                                                         6.8e-10;
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RESULT 13 US-09-642-281-5

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RESULT 14
US-09-102-716-12
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                                                                                                                                                                                                                                                                                                             Sequence 12, Application US/09102716 Patent No. 6395272 GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Sequence 5, Application US/09642281
Patent No. 6387698
GENERAL INFORMATION:
GENERAL INFORMATION:
Cerrottini, Jean-Charles; Carrel, Stefan; Reed, Daryl
TITLE OF INVENTION: MAGE-10 ENCODING CDNA, The Tumor Rejection
Antigen Precuros Mage-10, Antibodies Specific To The Molecu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
Best Local
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                                                                                              CORRESPONDENCE ADDRESS:
ADDRESSEE: LAHIVE & COCKFIELD
STREET: 60 State Street, Suite 510
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ATTORNEY/AGENT INFORMATION:
NAME: Schofield, Mary Anne
REGISTRATION NUMBER: 36,669
REFERENCE/DOCKET NUMBER: LUD 5457.2 DIV - JEL/MAS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 09/089,595
FILING DATE: 02-June-1998
APPLICATION NUMBER: US 08/724,774
FILING DATE: 03-October-1996
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/642,281
EILING DATE: 18-Aug-2000
CLASSIFICATION: 435
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.5 inch, 144 kb storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS:
ADDRESSEE: Fulbright & Jaworski LLP
STREET: 666 Fifth Avenue
  COMPUTER READABLE FORM:
                                                                                                                                                               NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                                        APPLICANT: Yashwant M. Deo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELECOMMUNICATION INFORMATION: TELEPHONE: (212) 318-3000
                                                                                                                                                                                                      TITLE OF INVENTION: THERAPEUTIC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE CHARACTERISTICS:
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                     COUNTRY: USA
ZIP: 02109-1875
                                                          STATE: Massachusetts
                                                                                 CITY: Boston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   STATE: New York
COUNTRY: USA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    TYPE: amino acid
TOPOLOGY: linear
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TELEPHONE: (212) 318-3000
TELEFAX: (212) 752-5958
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SOFTWARE: Wordperfect
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            OPERATING SYSTEM: PC-DOS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         60.2%; Score 112; DB 4; ilarity 100.0%; Pred. No. 6.8e-10; Conservative 0; Mismatches 0;
                                                                                                                                                                                                                                                 Joel Goldstein
Robert Graziano
                                                                                                                                                                                                                             Chezian Somasundaram
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US-08-432-483A-3
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Patent No. 6410022
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Query Match
Best Local Similarity
                                                                           REFERENCE/DOCKET NUMBER: INFORMATION FOR SEQ ID NO: 3:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INFORMATION FOR SEQ ID NO: 12: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                       COMPUTER READABLE FORM:
MEDIUM TYPE: diskette
COMPUTER: JBM PC compatible
COMPUTER: PC-DOS/MS-DOS
SOFTWARE: WORDER-fect 6.1
CURRENT APPLICATION DATA:
                                                                                                                  ATTORNEY/AGENT INFORMATION:
NAME: Leon R. Yankwich
REGISTRATION NUMBER: 30,
                                                     SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                         CLASSIFICATION: 424
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   APPLICANT: Rittersh
TITLE OF INVENTION:
TITLE OF INVENTION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CORRESPONDENCE ADDRESS:
ADDRESSEE: Banner &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NUMBER OF SEQUENCES:
                                                                                                                                                                                                                                                                APPLICATION NUMBER: US/
FILING DATE: 1-May-1995
                                                                                                                                                                                  FILING DATE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                       COUNTRY:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CITY: Chicago
TOPOLOGY:
                                                                                                                                                                                                      APPLICATION NUMBER:
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                                  ENGTH:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ATTORNEY/AGENT INFORMATION:
NAME: ATIOOId, Beth E.
REGISTRATION NUMBER: 35,430
REFERENCE/DOCKET NUMBER: MXI-043CP
TELECOMMUNICATION INFORMATION:
TELEPHONE: (617)227-7400
TELEPHONE: (617)227-5941
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       APPLICATION NUMBER: US/09/102,716 FILING DATE: 22-Jun-1998 PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: peptide FRAGMENT TYPE: internal
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1 FNNFTVSFWLRVPKVSASHLE 21
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60606-7407
                 I: 21 amino acids
amino acid
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Illinois
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         & Witcoff, Ltd
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60.2%; Score 112; DB 4; 100.0%; Pred. No. 6.8e-10;
                                                                                                                                                                                                                                                                                        US/08/432,483A
                                                                                                                      30,237
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                                                                                                   95,179(TCS-95179)
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0,

Gaps

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HYDOTHETICAL:
ANTI-SENSE:

PARTI-SENSE:

PRATURE:

NAME/KEY: 21-amino acid tetanus toxoid universal

NAME/KEY: 21-amino acid tetanus toxoid universal

NAME/KEY: helper T cell epitope.

LOCATION:

PUBLICATION IMPORMATION:

AUTHORS: Panina-Bordignon, P., et al.

TITLE: Universally immunogenic T cell

TITLE: promiscuous binding to human MHC class II and

TITLE: promiscuous recognition by T cells

JOURNAL: European Journal of Immunology

VOLUME: 19

ISSUE:

PAGES: 2237-2242

DATE: 1989

RELEVANT RESIDUES IN SEQ ID NO: 3:FROM 1 TO 21

US-08-432-483A-3

Query Match

Best Local Similarity 100.0%; Pred. No. 6.8e-10;

Matches 21: Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Matches 21: Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Oy 1 FNNFTVSFWLRVPKVSASHLE 21

Db 1 INTTVSFWLRVPKVSASHLE 21

Search completed: September 24, 2003, 17:00:22

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2 US-09-405-986-2
2 US-10-223-809A-6
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2 US-10-261-208-5
2 US-10-203-711-8
3 US-09-848-834A-14
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2 US-10-130-973A-9
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Sequence 3, Appli
Sequence 3, Appli
Sequence 4, Appli
Sequence 6, Appli
Sequence 1, Appli
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9 1	Sequence 4, Appli	14,	15,	Sequence 6, Appli	4,	7,	12,	8, 7	18,	34,	e 16	1,	Ņ	20,		12,	11,	Sequence 17, Appl	9, Ap	44,	Sequence 43, Appl	12,	20	Sequence 4, Appli	14	16	Œ	<u>ن</u> د	Sequence 3, Appli

ALIGNMENTS

RESULT 1 US-09-848-834A-10

Sequence 10, Application US/09848834A Patent No. US20020076416A1

GENERAL INFORMATION:
APPLICANT: Aphton Corporation
TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: PatentIn version 3.0

SEQ ID NO 10 LENGTH: 34

NAME/KEY: PEPTIDE
LOCATION: (22)..(25)
OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTIDE
LOCATION: (26)..(34)
OTHER INFORMATION: Amino acids 2-10 of the human Gn
NAME/KEY: MOD_RES
LOCATION: (34)..(34)
OTHER INFORMATION: Amidated glycine or glycinamide NAME/KEY: MOD_RES
LOCATION: (1)..(1)
OTHER INFORMATION: Amidated phenylalanine
NAME/KEY: PEPTIDE
LOCATION: (1)..(21)
OTHER INFORMATION: Amino acids 947-967 of the Tetanus Toxoid Precursor
OTHER INFORMATION: (Tentoxylysin) OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 947-967 OTHER INFORMATION: Tetanus toxoid precursor (Tentoxylysin) linked by a spacer OTHER INFORMATION: ino acid sequence 2-10 of the GnRH hormone FEATURE: ORGANISM: Artificial Sequence TYPE: PRT human GnRH hormone to of

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APPLICANT: Aphton Corporation
FITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
NUMBER OF SED ID NOS: 20
SOFTWARE: PatentIn version 3.0
SEO ID NO 18
LENGTH: 50
                                                                            RESULT 3
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US-09-848-834A-18
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                  GENERAL INFORMATION
                                      Sequence 3, Application US/09943548 Patent No. US20020042364A1
                                                                                                                                                                                                                                                      Query Match
Best Local :
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APPLICANT: Rittershaus, Charles
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  OTHER INFORMATION: Amidated glycine or glycinamide NAME/KEY: PEPTIDE LOCATION: (1)..(10)
OTHER INFORMATION: Amino acid sequence 1-10 of the NAME/KEY: PEPTIDE LOCATION: (11)..(16)
OTHER INFORMATION: Spacer peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE: OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-10 of human OTHER INFORMATION: GnRH linked by a spacer to amino acid sequence 947-967 of the Tet OTHER INFORMATION: anus toxoid precursor (Tentoxylysin) protein linked by a spacer to OTHER INFORMATION: o amino acid sequence 2-10 of human GnRH
                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: PEPTIDE LOCATION: (38)..(41)
OTHER INFORMATION: Spacer peptide
                                                                                                                                                                                                                                                                                                                              OTHER INFORMATION: Amino acid sequence 2-10 of the human GnRH
                                                                                                                                                                                                                                                                                                                                                                                                                                            NAME/KEY: PEPTIDE
LOCATION: (17)...(37)
OTHER INFORMATION: Amino acid sequence 947-967
OTHER INFORMATION: oxylysin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: MOD_RES
LOCATION: (1)..(1)
OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
                                                                                                                                                                                                                                                                                                                                                  NAME/KEY: PEPTIDE LOCATION: (42)..(
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Pred. No. 5e-18;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  of the human GnRH hormone
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US-09-848-834A-4
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                 Sequence 6, Application US/09785215
Publication No. US20020187157A1
GENERAL INFORMATION:
APPLICANT: JENSEN, Martin Roland et al.
TITLE OF INVENTION: NOVEL METHOD FOR DOWN-REGULATION OF AMYLOID
FILE REFERENCE: 3631-0107P
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Best Local :
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TITLE OF INVENTION: Chimeric Peptide Immunogens
FILE REFERENCE: 1102865-0047
CURRENT APPLICATION NUMBER: US/09/848,834A
CURRENT FILING DATE: 2001-05-04
PRIOR APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
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Best Local
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LENGTH: 21
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                                                                                                                                                                                                                                                                                                                                                                                                                         NAME/KEY: PEPTIDE
LOCATION: (1)..(21)
OTHER INFORMATION: AG
OTHER INFORMATION: TO
CURRENT APPLICATION NUMBER: US/09/785,215
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TITLE OF INVENTION: MODULATION OF CHOLESTERYL ESTER TRANSFER PROTEIN (CETP) ACTIVI
FILE REFERENCE: TCS-411.1P US-1; Tcs-411.1P US-2

CURRENT APPLICATION NUMBER: US/09/943,548

CURRENT FILING DATE: 2001-08-30

PRIOR APPLICATION NUMBER: 08/432,483

PRIOR PILING DATE: 1995-05-01

PRIOR APPLICATION NUMBER: PCT/US96/06147

PRIOR APPLICATION NUMBER: PCT/US96/06147

PRIOR PILING DATE: 1996-05-01

PRIOR PILING DATE: 1996-05-01

PRIOR PILING DATE: 1996-05-01

PRIOR FILING DATE: 1997-10-17

NUMBER: OF SEQ ID NOS: 9

PRIOR FILING DATE: 1997-10-17

NUMBER: OF SEQ ID NOS: 9
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Tetanus bacillus
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      OTHER INFORMATION: helper T cell epitope of tetanus
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                                                                                                                                                                                                                                                                                                                                                                                                                         Amino acid sequence 947-967 of Tetanus Toxoid Precursor (Tentoxylysin)
                                                                                                                                                                                                                                                                                                                                       60.2%; Score 112; DB 9; 100.0%; Pred. No. 2.1e-08
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Pred. No.
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; TYPE: PRT ; ORGANISM: Clostridium tetani US-09-405-986-2
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TYPE: PRT
; ORGANISM: Clostridium tetani
US-09-785-215-6
                                                                                        FILE REFERENCE: 674542-2008

CURRENT APPLICATION NUMBER: US/10/223,809A

CURRENT FILING DATE: 2002-08-20

PRIOR APPLICATION NUMBER: US 60/337,543

PRIOR FILING DATE: 2001-08-20

PRIOR APPLICATION NUMBER: US 60/373,027

PRIOR FILING DATE: 2002-04-16

PRIOR APPLICATION NUMBER: DE 2001 01231

PRIOR APPLICATION NUMBER: DE 2001 01231

PRIOR FILING DATE: 2001-08-20

PRIOR FILING DATE: 2001-08-20
                                                                                                                                                                                                                                                                                                                                                                                            US-10-223-809A-6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         TITLE OF INVENTION: MULTIPLE ANTIGEN GLYCOPEPTIDE CARBOHYDRATE, VACCINE TITLE OF INVENTION: COMPRISING THE SAME AND USE THEREOF FILE REFERENCE: 1341 US 3565 CURRENT APPLICATION NUMBER: US/09/405,986 CURRENT FILING DATE: 1999-09-27 EARLIER FILING DATE: 1999-09-27 EARLIER APPLICATION NUMBER: 60/041,726 EARLIER FILING DATE: 1997-03-27 NUMBER OF SEQ ID NOS: 3
SOFTWARE: Patentin Ver. 2.1
SEQ ID NO 2
                                                                                                                                                                                                                                                                                                                                   GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                   Sequence 6, Application US/10223809A Publication No. US20030157117A1
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Best Local (
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Best Local :
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NUMBER OF SEQ ID NOS: 19
SOFTWARE: PatentIn version 3.1
SEQ ID NO 6
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SOFTWARE: F
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APPLICANT: CANTACUZENE, Daniele
APPLICANT: LECLERC, Claude
APPLICANT: LO-MAN, Richard
                                                     PRIOR APPLICATION NUMBER: DE 2002 0058 PRIOR FILING DATE: 2002-04-16
                                                                                                                                                                                                                                                                        APPLICANT: Rasmussen, Peter Birk et al.
TITLE OF INVENTION: No. US20030157117Alel Method for Down-Regulation of Amyloid
                                                                                                                                                                                                                                                                                            APPLICANT: Pharmexa A/S APPLICANT: Rasmussen, I
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             LENGTH: 21
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PatentIn version 3.1
                                      SEQ ID NOS: 17
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US-10-261-208-5
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                                                              Matches
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Best Local :
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SEQUENCE CHARACTERISTICS:
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                                                                                                                                                                                                                                                                                   APPLICATION NUMBER: US/09/589,717
FILING DATE: 08-Unn-2000
APPLICATION UNUMBER: 09/089,595
FILING DATE: <Unknown>
ATTORNEY/AGENT INFORMATION:
NAME: Hanson, No. US20030158388A1man D.
REGISTRATION NUMBER: 30,946
REGISTRATION NUMBER: LUD 5457
                                                                                                                                                                                                                                                                                                                                                                                                                   OPERATING SYSTEM: PC-DOS
SOFTWARE: WORDPERFECT
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/10/261,208
FILING DATE: 30-Sep-2002
CLASSLETICATION: -CUNKNOWN>
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ZIP: 10022
COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.5 inch, 144 kb storage
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 NUMBER OF SEQUENCES: 5
CORRESPONDENCE ADDRESS:
ADDRESSEE: Felfe & Lynch
STREET: 805 Third Avenue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Pierre; Cerrottini, Jean-Charles; Carrel,
Stefan; Reed, Daryl
TITLE OF INVENTION: MAGE-10 ENCODING cDNA, The Tumor
                                                                                                                                                                                                                                                                         TELECOMMUNICATION INFORMATION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: Rimoldi, Donata; Jongeneel, Victor; Coulie
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                  1 FNNFTVSFWLRVPKVSASHLE 21
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FNNFTVSFWLRVPKVSASHLE
                                                                                                                                                          TYPE: amino acid TOPOLOGY: linear
                                                                                                                                                                                                                                       TELEPHONE: (212)
TELEFAX: (212) 83
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  CITY: New York City
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     COMPUTER:
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                                                              Conservative
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100.0%; Pr
                                                                             100.0%;
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NO: 5:
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Pred. No.
                                                                             Score 112;
Pred. No.
21
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                                                              Mismatches
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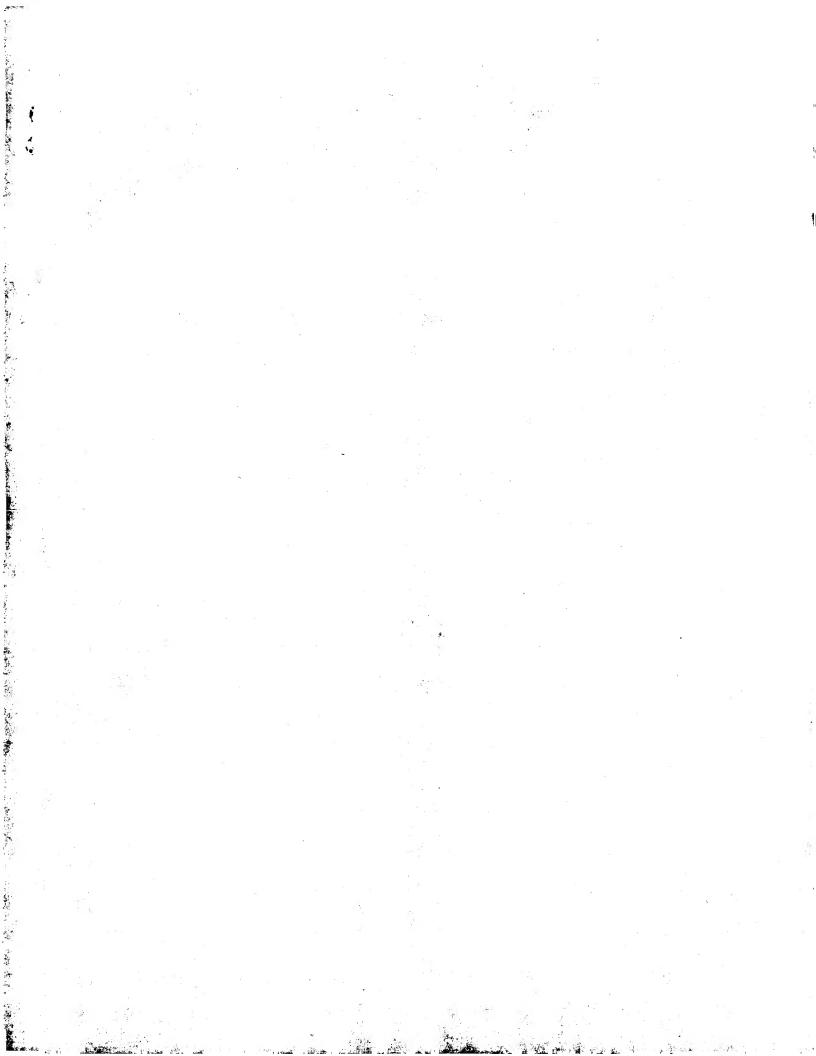
RESULT

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RESULT 11
US-10-223-711-8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 08/945,289
PRIOR FILING DATE: 1997-10-17
PRIOR APPLICATION NUMBER: 09/943,334
PRIOR FILING DATE: 2001-08-30
PRIOR APPLICATION NUMBER: 09/943,548
PRIOR FILING DATE: 2001-08-30
NUMBER OF SEQ ID NOS: 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQ ID NO 6
LENGTH: 21
TYPE: PRT
                                         GENERAL INFORMATION:
                                                         Sequence 8, Application US/10223711 Publication No. US20030113344A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Sequence 6, Application US/10204362
Publication No. US20030086938A1
PROPERTY. STATION:
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Best Local Similarity
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Publication No. US20030108559A1
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Best Local
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CURRENT FILING DATE: 2002-08-16
NUMBER OF SEQ ID NOS: 16
SOFTWARE: Patentin Ver. 3.0
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             APPLICANT: M&E Biotech A/S
TITLE OF INVENTION: NO. US20030086938A1el Method For Down-Regulation Of Amyloid
FILE REFERENCE: 3631-0120P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APPLICANT: Thomas, Lawrence J.
TITLE OF INVENTION: MODULATION OF CHOLESTERYL ESTER TRANSFER PROTEIN (CETP) ACTIVITY
FILE REFERENCE: TCS-411.1P US-3
   APPLICANT: Bakaletz, APPLICANT: Kaumaya,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                PRIOR APPLICATION NUMBER: PCT/US96/06147 PRIOR FILING DATE: 1996-05-01
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SOFTWARE: PatentIn version 3.1
                                                                                                                                                                                                                                                                                                                                          OTHER INFORMATION: helper T cell epitope of tetanus toxin
                                                                                                                                                                                                                                                                                                                                                                                    ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                             ENGTH:
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Pravin T.P
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100.0%; Pr
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100.0%;
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Pred. No. 2.1e-08;
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RESULT 13
US-09-816-467-2
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; TENGTH: 21
; ORGANISM: Clostridium tetani
US-10-223-711-8
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              PRIOR APPLICATION NUMBER: 60/202,328
PRIOR FILING DATE: 2000-05-05
NUMBER OF SEQ ID NOS: 20
SOFTWARE: PatentIn version 3.0
SEQ ID NO 14
LENGTH: 37
TYPE: PRT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            GENERAL INFORMATION:
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                                                                                    Matches
                                                                                                      Query Match
Best Local Similarity
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           APPLICANT: Aphton Corporation TITLE OF INVENTION: Chimeric Peptide Immunogens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              CURRENT APPLICATION NUMBER: US/10/223,711
CURRENT FILING DATE: 2002-08-19
PRIOR APPLICATION NUMBER: 09/148,711
PRIOR FILING DATE: 1998-09-04
PRIOR APPLICATION NUMBER: 08/460,502
PRIOR FILING DATE: 1995-06-02
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FILE REFERENCE: 1102865-0047
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TITLE OF INVENTION: Synthetic Chimeric Fimbrin Peptides FILE REFERENCE: 18525/04058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              NUMBER OF SEQ ID NOS: 12
                                                                                                                                                                                      LOCATION: (17)..(37)
OTHER INFORMATION: Amino acid sequence 947-967 of the Tetanus toxoid precursor OTHER INFORMATION: (Tentoxylysin)
                                                                                                                                                                                                                                NAME/KEY: PEPTIDE
LOCATION: (11)..(16)
OTHER INFORMATION: Spacer peptide
NAME/KEY: PEPTIDE
LOCATION: (17)..(37)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                        OTHER INFORMATION: Chimeric peptide consisting of amino acid sequence 1-1 OTHER INFORMATION: nRH hormone linked by a spacer to amino acid sequence OTHER INFORMATION: the Tetanus toxoid precursor (Tentoxylysin)
                                                                                                                                                                                                                                                                                                                                       LOCATION: (1)..(10)
OTHER INFORMATION: Amino acid sequence 1-10 of the human GnRH hormone
                                                                                                                                                                                                                                                                                                                                                                                              LOCATION: (1)..(1)
OTHER INFORMATION: Pyroglutamic acid or 5-oxoproline
                                                                                                                                                                                                                                                                                                                                                                                                                                NAME/KEY: MOD_RES LOCATION: (1)..(1
                                                                                                                                                                                                                                                                                                                                                                                        NAME/KEY: PEPTIDE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           FEATURE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local
17 FNNFTVSFWLRVPKVSASHLE 37
                      1 FNNFTVSFWLRVPKVSASHLE 21
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                                                                                    Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Conservative
                                                                                                      60.2%; Score 112; DB 9; 100.0%; Pred. No. 3.8e-08
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 60.2%; Score 112; I
100.0%; Pred. No. 2.
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                                                                                    Mismatches
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                                                                                                                        Length 37
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APPLICANT: COEN, LAURENT
APPLICANT: BINZOLAS, ROSARIO OSTA
APPLICANT: BRULET, PHILIPPE
TITLE OF INVENTION: HYBRID PROTEINS THAT MIGRATE RETROGRADELY AND
TITLE OF INVENTION: TRANSYMAPTICALLY INTO THE CNS
FILE REFERENCE: 03495.0174-01000
CURRENT APPLICATION NUMBER: US/09/816,467
CURRENT APPLICATION NUMBER: 0501-03-26
PRIOR APPLICATION NUMBER: 60/055,615
PRIOR APPLICATION NUMBER: 60/055,236
PRIOR APPLICATION NUMBER: 60/065,236
PRIOR PRIOR DATE: 1997-11-13
NUMBER OF SEQ ID NOS: 19
SOFTWARE: Patentin Ver. 2.1
RESULT 15
US-10-130-973A-9
; Sequence 9, Application US/10130973A
; Publication No. US20030147895A1
                                                                                                                                                                                                                                                                                                                                                                                                     PRIOR APPLICATION NUMBER: PCT/GB00/04644
PRIOR FILING DATE: 2000-12-04
PRIOR APPLICATION NUMBER: GB 9928530.6
PRIOR FILING DATE: 1999-12-02
PRIOR APPLICATION NUMBER: GB 008658.7
PRIOR FILING DATE: 2000-04-07
NUMBER OF SEQ ID NOS: 18
SOFTWARE: Patentin version 3.0
SEQ ID NO 11
                                                                                                                                                                                                                                                                                        ; FEATURE:
; OTHER INFORMATION: synthetic construct
US-10-130-973A-11
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LENGTH: 463
TYPE: PRT
ORGANISM: Clostridium tetani
US-09-816-467-2
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Publication No. US20030004121A1
GENERAL INFORMATION:
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Best Local Similarity
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Best Local :
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APPLICANT: Sutton, John
APPLICANT: Sutton, John
APPLICANT: Silman, Nigel
APPLICANT: Sliman, Nigel
TITLE OF INVENTION: Constructs for Delivery of Therapeutic Agents to Neuronal Cells
TILE REFERENCE: 1581.0920000
CURRENT EPPLICATION NUMBER: US/10/130,973A
CURRENT FILING DATE: 2002-10-21
                                                                                                                                                                                                                                                                                                                                            LENGTH: 605
TYPE: PRT
ORGANISM: Artificial Sequence
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                                                                                                                         21;
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                                                                                                                                                                                                                           60.2%; Score 112; DB 12; 100.0%; Pred. No. 7.3e-07;
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Search completed: September 24, 2003, 17:33:07 Job time: 18.0471 secs
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SOFTWARE: PatentIn version 3.0 SEQ ID NO 9
                                                                                                                                                                                                                                                                                                                                                                                                                                           Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                       Matches
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APPLICANT: Sutton, John
APPLICANT: Sutton, John
APPLICANT: Silman, Nigel
TITLE OF INVENTION: Constructs for Delivery of Therapeutic Agents to Neuronal Cell
TITLE OF INVENTION: DESCRIPTION CONSTRUCTS FOR DELIVERY OF THE STREET SUCCESSION OF THE STREET SUCCESSION OF THE SUCC
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ORGANISM: Artificial Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        FEATURE:
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21;
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                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
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100.0%; Pred. No. 8e-
cive 0; Mismatches
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Title:
Perfect score:
Sequence:
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Maximum Match 100%
Listing first 45 summaries
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Maximum DB seq length: 2000000000
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PIR_76:*
1: pir1:*
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Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                 US-09-848-834A-10
186
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                                                                                                                                                                                                                                                                     283308 seqs, 96168682 residues
                                                                                                                                                                                                                                                                                                                                                            1 FNNFTVSFWLRVPKVSASHLEGPSLHWSYGLRPX 34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen Ltd.
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Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	ω	2	1	No.	Result	
52	52	52	52	53	53.5	53.5	54	54.5	54.5	54.5	54.5	56	56	56.5	56.5	56.5	57	57.5	58	58	59	61	61	61	61	61.5	62	112	Score		
28.0	28.0		28.0										30.1	30.4	30.4	30.4	30.6	30.9	31.2	31.2	31.7		32.8		32.8	33.1	33.3	60.2	Match		œ
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\$23158	151423	RHSHG	RHPGG	S78196	T17202	В37837	178541	A49777	S46431	S70582	RHHUG	I40645	T01618	S21178	JH0256	S48106	T36589	RHMSG	140631	A48940	BTCLAB	S39791	I40813	S48109	S48110	RHRTG	S33411	BTCLTN	ID		
nucleocapsid prote	gonadoliberin prec	•	gonadoliberin – pi	probable maturase	DNA-directed DNA p	probable alpha-amy	gonadoliberin prec	botulinum neurotox	botulinum neurotox	botulinum neurotox	gonadoliberin prec	botulinum neurotox	hypothetical prote	botulinum neurotox	botulinum neurotox	neurotoxin type E	probable transmemb	gonadoliberin prec	non-proteolytic bo	OH)	bontoxilysin (EC 3	O			neurotoxin type F	gonadoliberin prec	botulinum neurotox	tentoxilysin (EC 3	Description		

45	4 4 4 4	42	41	40	39	38	37	36	35	34	ω ω	32	31	30
50	50	50.5	50.5	51	51	51	51	51	51	51.5	51.5	51.5	52	52
26.9	26.9	27.2	27.2	27.4	27.4	27.4	27.4	27.4	27.4	27.7	27.7	27.7	28.0	28.0
836	432 591	1450	438	1196	1196	944	659	496	292	573	537	91	467	464
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JE0248	T04/26	T30273	T52082	S46430	JQ1467	T18627	F70453	T38197	S22441	S78197	S78195	JC7393	MNVUW1	MNVUWC
ATP-binding casset	nypothetical prote		alpha galactosyltr	botulinum neurotox	toxin, nontoxic co	hypothetical prote	aconitase - Aquife	probable myb-like	protein kinase (EC	probable maturase	cytochrome-c oxida	medaka-type gonado	nonstructural prot	nonstructural prot

ALIGNMENTS

R; Denotz, S.; Lanzavecchia, L.; Eisel, U.; Niemann, H.; Widmann, C.; Corradin, G. J. Immunol. 142, 394-402, 1989 A;Title: Delineation of several DR-restricted tetanus toxin T cell epitopes. A;Reference number: J50098; MUID:89093918; PMID:2463305 A;Contents: annotation; epitope region R;Schiavo, G.; Benfenati, F.; Poulain, B.; Rossetto, O.; de Laureto, P.P.; DasGupta, Nature 359, 832-835, 1992 A;Title: Tetanus and botulinum-B neurotoxins block neurotransmitter release by proteo A;Reference number: S27125; MUID:93063293; PMID:1331807 A;Contents: annotation	A; Molecule type: DNA A; Molecule type: DNA A; Residues: 743 1315 <fa2> A; Cross-references: GB:M12739; NID:g144920; PIDN:AAA23282.1; PID:g144921 A; Accession: B25194 A; Molecule type: protein A; Residues: 865-894 <fa3> R; Matsuda, M.; Lei, D.L.; Sugimoto, N.; Ozutsumi, K.; Okabe, T. Infect. Immun. 57, 3588-3593, 1989 A; Title: Isolation, purification, and characterization of fragment B, the NH-2-termin A; Reference number: A60759; MUID:90035436; PMID:2478476 A; Accession: A60759 A; Molecule type: protein A: Residues: 461-475 < MATTY A; Residues: 461-475 < MATT</fa3></fa2>	: Lyness, V.A. 14, 7809-7812, 1986 14, 7809-7812, 1986 te nucleotide sequence of tetanus toxin. A25757; MUID:87040747; PMID:3774547 A CFAI> GB:X06214; NID:940773; PIDN:CAA29564.1; ce: strain CN3911 ; Lyness, V.A.; Pickard, D.J.; Allen, G. 121-27, 1986 21-27, 1986 a25194; MUID:86085672; PMID:3510187	RESULT 1 BTCLIN BTCLIN tentoxilysin (EC 3.4.24.68) precursor - Clostridium tetani N;Alternate names: tetanis neurotoxin C;Species: Clostridium tetani C;Date: 31-Mar-1988 #sequence_revision 31-Mar-1988 #text_change 03-Jun-2002 C;Accession: A25689; A25757; A25194; B45194; A60759; S69348; S09364 R;Eisel, U; Jarausch, W; Goretzki, K; Henschen, A.; Engels, J.; Weller, U.; Hudel, EMBO J. 5, 2495-2502, 1986 EMBO J. 5, 2495-2502, 1986 A;Title: Tetanus toxin: primary structure, expression in E. coli, and homology with b A;Accession: A25689; MUID:87053814; pMID:3536478 A;Accession: A25689 A;Accession: A25689; MUID:87053814; pMID:3536478 A;Cross-references: GB:X04436; NID:g40769; pIDN:CAA28033.1; pID:g40770

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A; Molecule type: protein
A; Molecule type: protein
A; Residues: 2-31 < CDET>
A; Residues: 2-31 < CDET>
C; Comment: The source of this protein was an extrachromosomal plasmid.
C; Comment: The precursor is cleaved by endogenous proteinase activity to form light (fragment B) dual Chains are not toxic when separated). The amino end of the heavy chain (fragment B) C; Comment: Fragment B forms ion channels in a light bilayer. Fragment C binds to ganglid C; Comment: This potent neurotoxin binds to peripheral neuronal synapses, is internalized presynaptic neurons. It inhibits neurotransmitter release by proteolytic cleavage of sy
                                                                                                                                                  gonadoliberin precursor rat
N;Alternate names: gonadoliberin-associated protein (GAP); gonadotropin releasing
N;Contains: gonadoliberin; prolactin release-inhibiting factor
C;Species: Rattus norvegicus (Norway rat)
C;Date: 31-Mar-1988 #sequence_revision 31-Mar-1988 #text_change 18-Jun-1999
C;Accession: A40147; B26173; A48410
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             A; Molecule type: DNA
A; Residues: 1-1268 <THO>
A; Cross-references: EMBL:X68262;
C; Superfamily: tetanus toxin
C; Keywords: neurotoxin
R;Bond, C.T.; Hayflick, J.S.; Seeburg, P.H.; Adelman, J.P.
Mol. Endocrinol. 3, 1257-162, 1989
A;Title: The rat gonadotropin-releasing hormone: SH locus: structure and hypothalamic A;Reference number: A40147; MUID:89384661; PMID:2476669
A;Accession: A40147
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   C;Accession: S33411; S31860
R;Thompson, D.E.; Hutson, R.A.; East, A.K.; Allaway, D.; Collins, M.D.; Richardson, FEMS Microbiol. Lett. 108, 175-182, 1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   botulinum neurotoxin type F - Clostridium barati
C;Species: Clostridium barati
C;Date: 13-Jan-1995 #sequence_revision 13-Jan-1995 #text_change 16-Jul-1999
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F;234/Active site: Glu #status predicted
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100.0%;
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A;Cross references: GB:M12579; NID:g204445; PIDN:AAA41263.1; PIDR:R;Maier, C.C.; Marchetti, B.; LeBoeuf, R.D.; Blalock, J.E. Cell. Mol. Neurobiol. 12, 447-454, 1992
A;Title: Thymocytes express a mRNA that is identical to hypothal A;Reference number: A48410; MUID:93105480; PMID:1468115
A;Accession: A48410
A;Status: preliminary
A;Molecule type: mRNA
A;Residues: 1-92 <MAI>
A;Cross references: GB:550870; NID:g262059; PIDN:AAB24572.1; PID A;Experimental source: thymus
A;Note: sequence extracted from NCBI backbone (NCBIN:121082, NCB C;Genetics:
                                                                                                                                                                                                                                                                                                                           A;Cross-references: EMBL:X70821; NID:g407792; PIDN:CAA50152.1; PID:g407793 C;Superfamily: tetanus toxin C;Keywords: neurotoxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A; Description: stimulates pituitary secretion of lutropin and follitropin A; Note: gonadoliberin-associated protein may have prolactin release inhibiting activi C; Superfamily: gonadoliberin (C; Keywords: amidated carboxyl end; hormone; hypothalamus; placenta; pyroglutamic acid F; 1-23/pomain: signal sequence #status predicted <SIG> F; 24-92/product: progonadoliberin #status predicted <PGN> F; 24-93/product: gonadoliberin #status predicted <GLN> F; 24-33/product: prolactin release-inhibiting factor #status predicted <PIF> F; 37/product: prolactin release-inhibiting factor #status predicted <PIF> F; 37/modified site: amidated carboxyl end (Gln) (in mature form) #status predicted F; 33/modified site: amidated carboxyl end (Gly) (amide in mature form from following F; 33/modified site: amidated carboxyl end (Gly) (amide in mature form from following F; 34/modified site: amidated carboxyl end (Gly) (amide in mature form from following F; 34/modified site: amidated carboxyl end (Gly) (amide in mature form from following F; 34/modified site: amidated carboxyl end (Gly) (amide in mature form from following F; 34/modified site: amidated carboxyl end (Gly) (amide in mature form from following F; 34/modified site: amidated carboxyl end (Gly) (amide in mature form from following F; 34/modified site: amidated carboxyl end (Gly) (amide in mature form from following F; 34/modified site: amidated carboxyl end (Gly) (amide in mature form from following F; 34/modified site: amidated carboxyl end (Gly) (amide in mature form from following F; 34/modified site: amidated carboxyl end (Gly) (amide in mature form from following filed site: amidated carboxyl end (Gly) (amide in mature form from following filed site: amidated carboxyl end (Gly) (amide in mature form from following filed site: amidated carboxyl end (Gly) (amide in mature form from following filed site: amidated carboxyl end (Gly) (amide in mature form from following filed site: amidated carboxyl end (Gly) (amide in mature form from following filed site: amidated carbox
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C;Species: Clostridium botulinum
C;Date: 14-Jul-1995 #sequence_revision 10-Nov-1995 #text_change
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A;Residues: 1-92 <BON>
A;Residues: 1-92 <BON>
A;Cross-references: GB:M31670; NID:g204447; PIDN:AAA41264.1;
A;Cross-references: GB:M31670; NID:g204447; PIDN:AAA41264.1;
R;Adelman, J.P.; Mason, A.J.; Hayflick, J.S.; Seeburg, P.H.
Proc. Natl. Acad. Sci. U.S.A. 83, 179-183, 1986
A;Title: Isolation of the gene and hypothalamic cDNA for the A;Reference number: A94090; MUID:86094338; PMID:2867548
A;Accession: B26173
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A; Title: Gene probes for identification of the botulinal A; Reference number: S48103; MUID:94013372; PMID:8408542
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R;Campbell, K.D.; Collins, M.D.; East, A.K.
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A; Residues: 1-92 <ADE>
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3; Mismatches
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neurotoxin type F - Clostridium botulinum (fragment)
C;Species: Clostridium botulinum
C;Stei: 12-Feb-1998 #sequence_revision 20-Feb-1998 #text_change 16-Jul-1999
C;Accession: S48109
R;Campbell, K.D.; Collins, M.D.; East, A.K.
J. Clin. Microbiol. 31, 2255-2262, 1993
A;Title: Gene probes for identification of the botulinal neurotoxin gene and A;Reference number: S48103; MUID:94013372; PMID:8408542
A;Accession: S48109
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C;Date: 16-Aug-1996 #sequence_revision 16-Aug-1996 #text_change 16-Jul-1999
C;Accession: 140813; S48108
R;East, A.K.; Richardson, P.T.; Allaway, D.; Collins, M.D.; Roberts, T.A.; PEMS Microbiol. Lett. 96, 225-230, 1992
A;Title: Sequence of the gene encoding type F neurotoxin of Clostridium bot
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S39791
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                                                                                                                     neurotoxin - Clostridium botulinum
C:Species: Clostridium botulinum
C:Date: 07-Oct-1994  #sequence_revision 01-Dec-1995  #text_change 16-Jul-1999
C:Accession: S39791
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R;Campbell, K.; Collins, M.D.; East, A.K.
Biochim. Biophys. Acta 1216, 487-491, 1993
A;Title: Nucleotide sequence of the gene coding for Clostridium A;Reference number: S39791; MUID:94092745; PMID:8268233
A;Accession: S39791
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A; Residues: 1-1274 < RES>
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A; Accession: I40813
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8; Conserv
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0.77;
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                                             botulinum (Clostridium
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A;EXPELLIBORDER R.; FUJINAGA, Y.; INOUE, N., NUMBER R;FUJITA, R.; FUJINAGA, Y.; INOUE, N., NUMBER R;FUJITA; FUJINAGA, A;Title: Molecular characterization of two A;Title: Molecular characterization of two minuser: S67988; MUID:96096783;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 bontoxilysin (EC 3.4.24.69) A precursor - Clostridium botulinum N;Alternate names: botulinum neurotoxin type A C;Species: Clostridium botulinum C;Species: Clostridium botulinum C;Species: Clostridium botulinum C;Date: 31-Mar-1993 #sequence_revision 31-Mar-1993 #sext_change 18-Jun-1999 C;Accession: A35294; S09492; S68220; A33401; A53884; A60025; A27000 R;Binz, T.; Kurazono, H.; Wille, M.; Frevert, J.; Wernars, K.; Niemann, H. J. Biol. Chem. 265, 9153-9158, 1990 A;Fitle: The complete sequence of botulinum neurotoxin type A and comparison A;Reference number: A35294; MUID:90264400; PMID:2160960 A;Accession: A35294
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A; Residues: 1-1296 <BIN>
A; Residues: 1-1296 <BIN>
A; Cross-references: GB:M30196; NID:g144864; PIDN:AAA23262.1; PI
A; Experimental source: strain 62A, subtype A
R; Thompson, D.E.; Brehm, J.K.; Oultram, J.D.; Swinfield, T.J.;
Eur. J. Blochem. 189, 73-81, 1990
A; Title: The complete amino acid sequence of the Clostridium bo
A; Reference number: S09492; MUID:90235864; PMID:2185020
A; A; Accession: S09492
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A;Molecule type: DNA
A;Residus: 1-1297 <CAM>
A;Cross-references: EMBL:X74162; NID:g441275; PIDN:CAA52275.1; PID:g441276
A;Title: Botulinum neurotoxin type A: sequence of amino acids at A;Reference number: A60025; MUID:91120847; PMID:2126206 A;Accession: A60025
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               R;Betley, M.J.; Somers, E.; DasGupta, B.R.
Biochem. Biophys. Res. Commun. 162, 1388-1395, 1989
A;Title: Characterization of botulinum type A neurotoxin gene:
A;Reference number: A33401; MUID:89350959; PMID:2669749
A;Accession: A33401
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C;Keywords: neurotoxin
                                                                                A; Note: sequence extracted: R; DasGupta, B.R.; Dekleva, I Biochimie 72, 661-664, 1990
                                                                                                                                                                 A; Experimental source: strain Hall
                                                                                                                                                                                           A; Molecule type: protein A; Residues: 867-880;1148-1217,'Y',1219 <GIM>
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J. Protein Chem. 12, 351-363, 1993
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A;Residues: 1-12 <FUJ>
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38.1%;
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                                                                                                             M.L.
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                                                                                                                                       NCBI backbone (NCBIP:139159); sequence
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A; Molecule type: protein
A; Relecules: 2-47 < CDAS2>
R; Blans, T.; Blasi, J.; Yamasaki, S.; Baumeister, A.; Link, E.; Suedhof, T.C.; Jahn, R.;
J. Biol. Chem. 269, 1617-1620, 1994
A; Title: Proteolysis of SNAP-25 by types E and A botulinal neurotoxins.
A; Reference number: A49708; MUID: 94124495; pMID: 8294407
A; Contents: annotation
C; Comment: Botulinum neurotoxins inhibit neurotransmitter release from cholinergic synap
C; Genetics:
A; Gene: atx; botA
C; Function:
A; Description: catalyzes hydrolysis of an Asn-Arg peptide bond in synaptosomal-associate
C; Superfamily: tetanus toxin
C; Keywords: disulfide bond; hydrolase; metalloproteinase; neurotoxin; transmembrane prot
F; 2444/Product: bontoxilysin A light chain #status experimental < LGHT>
F; 223,227/Binding site: zinc (His) #status predicted
F; 224/Active site: Glu #status predicted
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C;Date: 19-Dec-1993 #sequence_revision 18-Nov-1994 #text_change 18-Jun-1999
C;Accession: A48940; S48105; S2155; A42871; S07155; S08562; S07128; S08573; S085
R;Whelan, S.M.; Elmore, M.J.; Bodsworth, N.J.; Brehm, J.K.; Atkinson, T.; Minton, A;Title: Molecular cloning of the Clostridium botulinum structural gene encoding: A;Reference number: A48940; MUID:9238450; PMID:1514783
A;Reference number: A48940; MUID:9238450; PMID:1514783
A;Residues: preliminary
A;Molecule type: DNA
A;Residues: 1-1991 (WHE)
A;Cross-references: GB:M81186; NID:g144734; PIDN:AAA23211.1; PID:g144735
A;Cross-references: GB:M81186; NID:g144734; PIDN:AAA23211.1; PID:g144735
A;Cross-references: GB:M81186; NID:g144734; PIDN:AAA23211.1; PID:g144735
A;Campbell, K.D.; Collins, M.D.; East, A.K.
J; Clin. Microbiol. 31, 2255-2262, 1933
A.Title: Gene arches for identification of the betaling o
A;Molecule type: DNA
A;Residues: 36-217,'G',219-224,'S',226-246 <SZA>
A;Residues: 36-217,'G',219-224,'S',226-246 <SZA>
A;Cross-references: EMBL:Z11934; NID:g40383; PIDN:CAA77991.1; PID:g40384
A;Kurazono, H.; Mochida, S.; Binz, T.; Eisel, U.; Quanz, M.; Grebenstein,
J. Biol. Chem. 267, 14721-14729, 1992
                                                                                                                                                                                                                                                                                         A; Molecule type: DNA
A; Residues: 634-994 <CAM>
A; Residues: 634-994 <CAM>
A; Residues: 634-994 <CAM>
A; Cross-references: EMBL:X70817; NID:9407782; PIDN:CAA50148.1;
A; Experimental source: proteolytic type B, strain NCTC 7273
A; Experimental source: proteolytic type B, strain NCTC 7273
A; Szabo, E.A.; Pemberton, J.M.; Desmarchelier, P.M.
submitted to the EMBL Data Library, April 1992
A; Description: Partial amino acid sequence of botulinum neuroto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              A;Title: Gene probes for identification of the botulinal A;Reference number: S48103; MUID:94013372; PMID:8408542 A;Accession: S48105
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A48940
bontoxilysin (EC 3.4.24.69) B precursor - Clostridium botulinum
N;Alternate names: botulinum neurotoxin type B (BoNT/B)
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A;Title: Partial sequence of the light chain
A:Reference number A27000
A;Accession: A27000
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2-6;445-453,'X',455-457
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57.1%;
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Pred. No.
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non-proteolytic botulinum neurotoxin type B precursor - Clostridium botulinum C;Species: Clostridium botulinum C;Species: Clostridium botulinum C;Species: 12-Aug-1996 #sequence_revision 12-Aug-1996 #text_change 16-Jul-1999 C;Accession: 140631; S48103; S48104; S36015
C;Accession: 140631; S48103; S48104; S36015
Curr. Microbiol. 28, 101-110, 1994
A;Title: Nucleotide sequence of the gene coding for non-proteolytic Clostridium . A;Reference number: 140631; MUID:94122659; PMID:7764370
A;Accession: 140631
A;Status: preliminary; translated from GB/EMBL/DDBJ
A;Molecule type: DNA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    A;Reference number: S27125; MUID:93063293; PMID:1331807
A;Contents: annotation
C;Comment: Botulinum neurotoxins inhibit neurotransmitter release fr
C;Genetics:
A;Gene: bont/b
C;Function: catalyzes hydrolysis of a Gln-Phe peptide bond in syn
C;Superfamily: tetanus toxin
C;Keywords: hydrolase; metalloproteinase; neurotoxin; transmembrane
C;Keywords: hydrolase; metalloproteinase; neurotoxin; transmembrane
C;Keywords: bontoxilysin B light chain #status experimental <LG
E;442-1291/Product: bontoxilysin B heavy chain #status experimental
E;330,234/Binding site: zinc (His) #status predicted
E;231/Active site: Glu #status predicted
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           A;Title: Botulinum neurotoxin type B (strain 657): partial sequence and similarity wi A;Reference number: S07155; MUID:89000987; PMID:3139097
A;Accession: S07155
A;Molecule type: protein
A;Residues: 2-29,'M',31-45 <DAS>
A;Accession: S08562
A;Molecule type: protein
A;Accession: S08562
A;Molecule type: protein
A;Residues: 442-463,'R',465-467 <DA2>
A;Residues: 442-463,'R',465-467 <DA2>
R;Schmidt, J.J.; Sathyamoorthy, V.; DasGupta, B.R.
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A; Residues: 442-459 <SCH3>
R; Schiavo, G.; Benfenati,
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A;Molecule type: protein
A;Residues: 2-17 <SCH2>
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A; Residues: 442-463, 'R', 465-467 <DA2>
R; Schmidt, J.J; Sathyamoorthy, V.; DasGupta, B.R.
Arch. Biochem. Biophys. 238, 544-548, 1985
A; Title: Partial amino acid sequences of botulinum neurotoxins
A; Reference number: S07128; MUID:85197963; PMID:3888113
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A; Status: nucleic acid
A; Molecule type: mRNA
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Biochimie 70,
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A;Note: sequence extracted from NCBI backbone (NCBIP:109365)
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A; Experiment
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Best Local
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O, 811-817, 1988
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A; Accession: 548103
A; Residues: preliminary; nucleic acid sequence not shown; translation not shown
A; Molecule type: DNA
A; Residues: 634-761, 'E', 763-841, 'M', 843, 'T', 845, 'N', 847-994 <CAM1>
A; Residues: 634-761, 'E', 763-841, 'NID:9407778; PIDN:CAA50145.1; PID:9407779
A; Experimental source: non-proteolytic strain 2129B (Scott)
A; Note: the nucleotide sequence was submitted to the EMBL Data Library, January 1993
A; Accession: 548104
A; Status: preliminary
A; Mclecule type: DNA
A; Residues: 634-843, 'T', 845, 'N', 847-994 <CAM2>
A; Cross-references: EMBL:X70810; NID:9407780; PIDN:CAA50150.1; PID:9407781
A; Cross-references: EMBL:X70810; PID:9407780; PIDN:CAA50150.1; PID:9407781
A; Cross-references: EMBL:X70810; PID:9407781
A; Cross-r
                                                                                                                                                                                                                                                A; Cross-references: EMBL:M14872; NID:g193576; PIDN:AAA37717.1; PID:g387175; C; Genetics: A; Introns: 45/3; 77/3
C; Function: Qonadoliberin stimulates pituitary secretion of lutropin and A; Description: gonadoliberin stimulates pituitary secretion of lutropin and A; Description: gonadoliberin stimulates pituitary secretion of lutropin and A; Description: gonadoliberin associated protein may have prolactin release inhibitions: amidated carboxyl end; hormone; hypothalamus; pyroglutamic acid C; Keywords: amidated carboxyl end; hormone; hypothalamus; pyroglutamic acid F;1-23/Domain: signal sequence #status predicted <SIG>F;22-31/Product: gonadoliberin #status predicted <GLB>F;35-90/Product: gonadoliberin associated protein #status predicted <GAP>F;32/Modified site: amidated carboxyl end (Gly) (amide in mature form from F;31/Modified site: amidated carboxyl end (Gly) (amide in mature form from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               gonadoliberin precursor - mouse
N;Alternate names: gonadotropin-releasing hormone (GnRH); luteinizing hormone releasing
N;Contains: gonadoliberin; gonadoliberin-associated protein (GAP)
C;Species: Mus musculus (house mouse)
C;Date: 31-Dec-1993 #sequence_revision 18-Mar-1997 #text_change 18-Jun-1999
C;Accession: A47578
R;Mason, A.J.; HayYlick, J.S.; Zoeller, R.T.; Young III, W.S.; Phillips, H.S.; Nikolics, Science 234, 1366-1371, 1986
A;Title: A deletion truncating the gonadotropin-releasing hormone gene is responsible fc A;Reference number: A47578; MUID:87069928; PMID:3024317
A;Accession: A47578
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A; Cross-references: EMBL; X71343; NID:g296148; PIDN:CAA50482.1; PID:g296149
R; Campbell, K.D.; Collins, M.D.; East, A.K.
J. Clin. Microbiol. 31, 2255-2262, 1993
A; Title: Gene probes for identification of the botulinal neurotoxin gene and A; Reference number: S48103; MUID:94013372; PMID:8408542
A; Accession: S48103
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A; Residues: 1-90 < MAS>
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12; Conserv
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9; Conser
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Pred. No. 0.51
0; Mismatches
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Pred. No. 8
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Obtulinum neutronam butyricum C; Species: Clostridium butyricum C; Date: 30-Jun-1992 #sequence_revision 15-May-1998 #text_change C; Accession: JH0256; S16145 M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R. R; Poulet, M.; Popoff, M.R. R; Popoff, M.R. R; Poulet, M.; Popoff, M.R. R; Pop
RESULT
JH0256
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A;Note: the nucleotide sequence w
C;Superfamily: tetanus toxin
C;Keywords: neurotoxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     A;Title: Gene probes for identification of the botulinal neurotoxin A;Reference number: S48103; MUID:94013372; PMID:8408542 A;Accession: S48106
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C;Superfamily:
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R;Oliver, K.; Harris, D.; James, K.D.; Parkhill, J.; submitted to the EMBL Data Library, May 1999
A;Reference number: Z21575
A;Accession: T36589
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C;Species: Streptomyces coelicolor
C;Date: 03-Dec-1999 #sequence_revision 03-Dec-1999 #text_change 18-Aug-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            C;Date: 14-Jul-1995 #sequence_revision 10-Nov-1995 #text_change 16-Jul-1999
C;Accession: S48106
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A; Residues: 1-502 <0
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A; Residues: 1-367
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                                                                                                                                                                                                                                   botulinum neurotoxin type E precursor -
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         483 AHFEGPQVHWGKGRQP
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nilarity 22.4%;
Conservative
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was submitted
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Pred. No. 3
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PMID:1543481
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Library, Ja
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RESULT 15
$21178
botulinum neurotoxin type E precursor - Clostridium botulinum
C;Species: Clostridium botulinum
C;Species: Clostridium botulinum
C;Date: 30-Sep-1993 #sequence_revision 30-Sep-1993 #text_change 15-Oct-1999
C;Accession: $21178; $48107; JH0257; B35394; A60027; $18111
R;Whelan, S.M.; Elmore, M.J.; Bodsworth, N.J.; Atkinson, T.; Minton, N.P.
R;Whelan, S.M.; Elmore, M.J.; Bodsworth, N.J.; Atkinson, T.; Minton, N.P.
Fur. J. Biochem. 204, 657-667, 1992
                                                                                                                                                                                                     A; Molecule type: DNA
A; Residues: 616-982 <CAM>
A; Cross-references: EMBL:X70815; NID:9407786; PIDN:CAA50146.1;
A; Cross-references: EMBL:X70815; NID:9407786; PIDN:CAA50146.1;
A; Note: the nucleotide sequence was submitted to the EMBL Data
R; Poulet, S.; Hauser, D.; Quanz, M.; Niemann, H.; Popoff, M.R.
Biochem. Biophys. Res. Commun. 183, 107-113, 1992
A; Title: Sequences of the botulinal neurotoxin E derived from C
A; Reference number: JH0256; MUID:92181428; PMID:1543481
A; Accession: JH0257
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                A;Cross-references: EMBL:x62683; NID:g40397; PIDN:CAA44558.1; PID:g40398 R;Campbell, K.D.; Collins, M.D.; East, A.K.
J. Clin. Microbiol. 31, 2255-2262, 1993
A;Title: Gene probes for identification of the botulinal neurotoxin gene and specific A;Reference number: S48103; MUID:94013372; PMID:8408542
A;Accession: S48107
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C;Keywords: neurotoxin
F;2-422/Product: botulinum neurotoxin type E light cha
F:423-1251/Product: botulinum neurotoxin type E heavy
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A:Experimental source: strain Beluga R:Binz, T.; Kurazono, H.; Wille, M.; J. Biol. Chem. 265, 9153-9158, 1990
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A; Status: nucleic acid sequence no A; Molecule type: DNA
A; Residues: 1-27, 'E', 29-1251 <POU>
                                                                                 A;Residues: 1-176,'R',178-197,'C',199-339,'R',341-772,'I',774-962,'FE',965-966,'R',968-A;Cross-references: EMBL:X62089; NID:g40393; PIDN:CAA43999.1; PID:g40394
                                                                                                                                             A; Molecule type: DNA
                                                                                                                                                                               A; Status: nucleic acid sequence not shown
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          A; Title: The complete amino acid sequence of the Clostridium botulinum type-E neurotoxin A; Reference number: S21178; MUID:92174922; PMID:1541280
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A; Accession: S16145
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   A; Status: preliminary; nucleic acid sequence not shown; translation not shown
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A; Residues: 1-229,'M',231-252 <FUJ>
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avy chain #status predicted</pre>
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Library, January
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A;Title: Botulinum neurotoxin type E fragmented with endoproteinase Lys-C reveals the A;Reference number: A60027; MUID:90344918; PMID:2116911
A;Accession: A60027
A;Molecule type: protein
A;Residues: 420-427 <GIM>A;Residues: 420-427 <GIM>A;Experimental source: strain Beluga
A;Rote: this fragment was generated by proteolysis with Lys-C rather than with trypsi C;Comment: The clostridial neurotoxins are highly potent protein toxins that inhibit C;Comment: The heavy chain mediates the binding of toxin to cell receptors while the C;Superfamily: tetanus toxin
C;Superfamily: tetanus toxin
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A;Status: not compared with conceptual A;Accession: B15294
A;Molecule type: DNA
A;Residues: 1-176,'R',178-252 <BIN>
A;Experimental source: strain Beluga
R;Gimenez, J.A.; DasGupta, B.R.
Biochimie 72, 213-217, 1990
Search completed: September Job time: 12.9612 secs
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Maximum Match 10
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BXA1_CLOBO
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GON1_MOUSE
VP2_AHSV6
BXE_CLOBU
BXA2_CLOBU
GON1_HUMAN
BXC1_CLOBO
GON1_MIACMU
GON1_PIG
ANY_CLOAB
DP0Z_MOUSE
GON1_XENLA
GON1_TUPGB
VNSS_TSWV1
VNSS_TSWV1
VNSS_TSWV1
VNSS_TSWV1
GONB_RANDY
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P04958 clostridium Q8rnm2 legionella P07490 rattus norv p3096 clostridium Q60393 clostridium p10845 clostridium p10846 clostridium p10846 clostridium p10846 clostridium p10846 clostridium p1095 clostridium p1095 clostridium p1095 clostridium p1095 clostridium p1095 clostridium p10148 homo sapien p18640 clostridium p10947 macaca mula p49921 sus scrofa p23671 clostridium p2588 ovis aries p23671 clostridium p109533 tupaia p1 si p25335 tupaia p1 si p26002 tomato spot p26003 tomato spot p
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ALIGNMENTS

R K	RA	교 주	RN	RĹ	RT Z	R R A F	RX	RC	RP	RZ	P Z	감	RA	RA S	Z X	RC	RP	R Z	Z Z	RA	RX	RC :	R R	Z Z	R	RT	RA S	0 X	RC	RP	R C	8	8	88	So	בו בו	D	DE!	ğ	Ŋ	AC	ID	RESULT
"Arrangement or disuitide bridges and positions of suirnydryl groups in tetanus toxin.";	enschen A., Weller U., Habermann E.;	PARTIAL SEQUENCE, AND DISULFIDE BONDS. MEDLINE=90201034; PubMed=2108021;		riol. 165:21-27(1986).	";		PubMed=3510187;		SEQUENCE OF 742-1314 FROM N.A.	ממנדי מלממי טלדי טיטיהי דיטיידידי	Proc Natl Acad sci II s A 100:1316-1321/2003)	"The genome sequence of Clostridium tetani, the causative agent of		Decker I., Herzberg C., Martinez-Arias R., Merkl R., Henne A.,	E E Eiger A Liceopana		SEQUENCE FROM N.A.	ACTUS NES.		weather N.F., Lyness V.A.;	PubMed=3	STRAIN-CN3911; PLASMID=75 Kbp;	SEQUENCE FROM N.A.	[2]	homology with botulinum toxins.";	oxin: primary structure, express	t	Honschon A		SEQUENCE FROM N.A.	NCB1_TaX1D=1513;	Clostridium	1	Ĺa.	Clostridium tetani.	remy or omeso	us toxin light chain (Tetanus toxin chain L); Tet	Ħ,	15-SEP-2003 (Rel. 05, Last annotation undate)	05, Created)		ID TETX_CLOTE STANDARD; PRT; 1314 AA.	JT 1

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neurotoxin.";

Nat. Struct. Biol. 4:788-792(1997).

NEUROTION: IT INTERNAL RELEASE BY AND MESYMAPTIC NEURONS. IT INHIBITS NEUROTRANSMITTER RELEASE BY ACTING AS A ZINC ENDOPEPTIDASE THAT CATALYZES THE HYDROLYSIS OF THE 76-GLN-[-PHE-77 BOND OF SYNAPTOBREVIN-2.

NOTE: Hydrolysis of 76-Gln-[-Phe-77 bond in the content of the c
                                                                                                                                                                                                                                                            EMBL;
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EMBL;
EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                    This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial
                        InterPro;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Nature
[9]
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"Tetanus and botulinum-B neurotoxins block neurotransmitter release by proteolytic cleavage of synaptobrevin.";
Nature 359:832-835(1992).
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neurotransmitter release an
EMBO J. 11:3577-3583(1992).
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MEDLINE-93010948; PubMed=1396558;
Schiavo G., Poulain B., Rossetto
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             "Structure of the receptor binding fragment HC of tetanus
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COFACTOR: Binds 1 zinc ion per subunit (By similarity).

SUBUNIT: THE PRECURSOR POLYPEPTIDE IS SUBSEQUENTLY CLEAVED T
YIELD SUBCHAINS L AND H. THESE REMAIN LINKED BY A DISULFIDE
AND ARE NON-TOXIC AFTER SEPARATION.

MISCELLANBOUS: THE C.-TERMINAL OF THE HEAVY CHAIN BINDS TO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GANGLIOSIDE RECEPTORS.
SIMILARITY: BELONGS TO PEPTIDASE FAMILY M27.
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1FV3;
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1AF9; 2
Pro; IPR000395; Bontoxilysin. Pro; IPR006025; Zn_MTpeptdse. PF01742; Peptidase_M27; 1.
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29-APR-98.
114-OCT-98.
27-MAR-00.
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PRODOM; PD001963; BONTOXILYSIN; 1.
PROSITE; PS00142; ZINC_PROTEASE; 1.
Neurotoxin; Transmembrane; Hydrolase;
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ZINC (CATALYTIC) (BY S
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CHAIN.
SY SIMILARITY).
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PURALLY POR RESULT PURALLY POR RESULT PURALLY POR REPORT OF REPORT POR REPORT OF REPORT POR REPORT 
RESULT 3
GON1_RAT
ID GON1
AC P074
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Best Local
GON1_RAT P07490;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                               ACT_SITE
ACT_SITE
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       28-FEB-2003 (Rel. 41, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Adenylosuccinate synthetase (EC 6.3.4.4) (IMP--aspartate ligase)
(AdSS) (AMPSase).
                                                                                                                                                                                                                                                                                                                                                                                                                   PROSITE; PS01266; ADENYLOSUCCIN_SYN_1; 1.
PROSITE; PS00513; ADENYLOSUCCIN_SYN_2; 1.
Purine biosynthesis; Ligase; GTP-binding.
NP_BIND 13 19 GTP (POTENTIAL).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           -i- FUNCTION: Plays an important role in the de novo pucleotide biosynthesis.
-i- CATALYTIC ACTIVITY: GTP + IMP + L-aspartate = GDP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                growth."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rankin S., Li 2., Isberg R.R.;
"Macrophage induced genes of Legionella pneumophila: protection
reactive intermediates and solute imbalance during intracellular
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ProDom; PD001188; Asucc_synthtase; TIGRFAMs; TIGR00184; purA; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       HAMAP; MF_00011; -; 1.
InterPro; IPR001114; Asucc_synthtase.
Pfam; PF00709; Adenylsucc_synt; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      HAMAP; MF_00011;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  EMBL; AF480918; AAM00648.1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (JAN-2002) to the EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Legionella pneumophila.
Bacteria; Proteobacteria;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          PURA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q8RNM2;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NCBI_TaxID=446;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  PATHWAY: AMP biosynthesis; first committed step. SIMILARITY: Belongs to the adenylosuccinate synthetase family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              adenylosuccinate.
PATHWAY: AMP biosynthesis;
                                                                                                                                                    168
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21; Conserv
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                                                                                                                                               YHNFVLTQYFKQPAVDLESLLGESLQWAEELRP
                                                                                                                                                                                                                                                                                                                                                  148
431 AA;
                                                                                                                                                                                                                                               Conservative
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                            STANDARD;
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                                                                                                                                                                                                                                                                                                                                            141 I
148 I
47381 MW;
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Pred. No.
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Pred. No.
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BY SIMILARITY.
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EMBL; $50870; AAB24572.1; -.
EMBL; M15579; AAA41263.1; -.
EMBL; M15579; AAA41264.1; -.
EMBL; M15527; AAA412141.1; ALT_SEO.
EMBL; M15528; AAA42139.1; -.
EMBL; M15528; AAA42139.1; -.
EMBL; M15528; CAAA42139.1; -.
EMBL; M15528; CAAA42139.1; -.
EMBL; M15528; CAAA42139.1; -.
EMBL; M15528; CAAA42139.1; CAANOTATED_CDS.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               01-APR-1988 (Rel. 07, Created)
01-APR-1988 (Rel. 07, Last sequence update)
01-APR-1988 (Rel. 07, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
Progonadoliberin I precursor promone I) (Gonadotropin-releasing (Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing factor
             PROSITE; PS00473; GNRH; 1. Cleavage on pair of basic residues; Hormone; Amidation; Hypothalamus; Placenta; Signal; Pyrrolidone carboxylic acid.
                                                                             InterPro; IPR002012; GnRH InterPro; IPR004079; Gonad Pfam; PF00446; GnRH; 1.
                                                                                                                                                                                                                                                                                                                                                              This
                                                                                                                                                                                                                                                                                                                                                                                                                                                           DNA locus.";
Science 233:1514-1517(1987).
Science 233:1514-1517(1987).
-i- FUNCTION: STIMULATES THE SECRETION OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       of gonadotropin-releasing hormone and prolactin release-inhibiting factor in human and rat.";
                                                                                                                                                                                                                                                                                           use by non-profit institutions as long a modified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=87149087; PubMed=3547652; Adelman J.P., Bond C.T., Douglass J., "Two mammalian genes transcribed from
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bond C.T., Hayflick J.S., Seeburg P.H., and The rat gonadotropin-releasing hormone:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Rattus norvegicus (Rat).
Eukaryota; Metazoa; Chordata;
Mammalia; Eutheria; Rodentia;
                                                                                                                                                                                                                                                            or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                             the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               TISSUE=Thymus
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                                                                                                                                                                                                                                                                             entities
                                                                                                                                                                                                                                                                                                                                               between
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=93105480; PubMed=1468115;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           hypothalamic expression.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Adelman J.P., Mason A.J., Hayflick J.S., Seeburg P.H.; "Isolation of the gene and hypothalamic cDNA for the common
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 1-47 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Thymocytes
luteinizing
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                           s SWISS-PROT entry is copyright. It is produced through a collaboration ween the Swiss Institute of Bioinformatics and the EMBL outstation - Buropean Bioinformatics Institute. There are no restrictions on its by non-profit institutions as long as its content is in no way
                                                                                                                                                                                                                                                                                                                                                                                                             SUBCELLULAR LOCATION: Secreted TISSUE SPECIFICITY: CENTRAL NEI
                                                                                                                                                                                                                                                                                                                                                                                             SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                               HORMONES
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                                                               PR01541; GONADOLIBRNI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           .C., Marchetti B., Leboeuf R.D., Blalock ytes express a mRNA that is identical to zing hormone-releasing hormone mRNA."; pl. Neurobiol. 12:447-454(1992).
                                                                                                                                                                                                                                                                            requires a license agreement (See http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Acad. Sci.
                                                                                                                                           NOT_ANNOTATED_CDS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             3:1257-1262(1989)
Pyrrolidone carboxylic 23
                                                                                                GonadoliberinI
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             U.S.A. 83:179-183(1986).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Craniata; Vertebrata; Euteleostomi; Sciurognathi; Muridae; Murinae; Rat
                                                                                                                                                                                                                                                                                                                                                                                                             NERVOUS SYSTEM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            opposite
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                                                                                                                                                                                                                                                                                                     There are no rest
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                                                                                                                                                                                                                                                                                                                                                                                                                                                              GONADOTROPINS; IT ST FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                             Usage
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RESULT 4
BREF_CLOSO
ID BXF_CC
AC P3099
DT 01-JU
RN (1)
RN (1)
RN EBST
RN (2)
RP SEQUE
RC STRAII
RX MEDIJI
RA East
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                      IDENTIFICATION OF SUBSTRATE.

X MEDIANE-94230352; PubMed-8175689;

X MEDIANE-94230352; PubMed-8175689;

A Yamasaki S., Baumeister A., Binz T., Blasi J., Link E., Cornille F.,

A Roques B., Fykse E.M., Suedhof T.C., Jahn R., Niemann H.;

"Cleavage of members of the synaptobrevin-YAMP family by types D and

"F botulinal neurotoxins and tetanus toxin.";

J. Biol. Chem. 269:12764-12772(1994).

C -!- FUNCTION: BOTULINUS TOXIN ACTS BY INHIBITING NEUROTRANSMITTER

C -!- FUNCTION: BOTULINUS TOXIN ACTS BY INHIBITING NEUROTRANSMITTER

C -!- FUNCTION: BOTULINUS TOXIN ACTS BY INHIBITING NEUROTRANSMITTER

C -!- FUNCTION: BOTULINUS TO PERIPHERAL NEURONAL SYNAPSES, IS INTERNALIZED

C AND MOVES BY RETROGRADE TRANSPORT UP THE AXON INTO THE SPINAL CORD

WHERE IT CAN MOVE BETWEEN POSTSYNAPTIC AND PRESYNAPTIC NEURONS. IT

C INHIBITS NEUROTRANSMITTER RELEASE BY ACTING AS A ZINC

ENUOPEPFIDASE THAT CATALYZES THE HYDROLYSIS OF THE 58-GLN-|-LYS-59

BOND OF SYNAPTOBREVINS-1 AND -2.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Query Match
Best Local S
Matches 15
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P30996;
01-JUL-1993 (Rel. 26, Created)
01-JUL-1993 (Rel. 26, Last sequence update)
01-JUL-1993 (Rel. 41, Last annotation update)
28-FEB-2003 (Rel. 41, Last annotation update)
Potulinum neurotoxin type F precursor (EC 3.4.24.69)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     CHAIN
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MOD_RES
SEQUENCE
                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=940133/4, furnity of the botulinal neurotoxin gene "Gene probes for identification of the botulinal neurotoxin gene "Gene probes for identification of neurotoxin types B, E, and F.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     "Conserved structure of genes encoding components of botulinum neurotoxin complex M and the sequence of the gene coding for the nontoxic component in nonproteolytic Clostridium botulinum type Curr. Microbiol. 29:69-77(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                 specific identification of neurotoxin types J. Clin. Microbiol. 31:2255-2262(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDLINE=93012902; PubMed=1398040;
East A.K., Richardson P.T., Allaway D.,
Roberts T.A., Thompson D.E.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        SEQUENCE OF 634-1002 FROM N.A. MEDLINE=94013372; PubMed=8408542;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=94297488; PubMed=7764998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     STRAIN-Hobbs FT10;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 1-64 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Sequence of the gene botulinum.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE FROM N.A. STRAIN=ATCC 23387;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Clostridium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bacteria;
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     BOND OF SY
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Collins M.D.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Conservative
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33
ACTIVITY: Limited hydrolysis of proteins of
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No. 0.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 type F.";
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ID BXG_CA
AC Q6039
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DT 01-NO
DT 28-FE
DE BOTULI
DE (Bont
GN BOTG:
OS Clost
COS CLOST
OX NCBL
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Best Local
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EMBL; S73676; AAC66475.1; -
EMBL; S70820; CAA50151.1; -
EMBL; X70816; CAA50147.1; -
PIR; 140813; I40813; I
                                                                                                                                                                                                                                                                                                                      01-NOV-1997 (Rel. 35, 28-FEB-2003 (Rel. 41, Botulinum neurotoxin t (Bontoxilysin G).
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DISULFID
SEQUENCE
SEQUENCE FROM N.A.

STRAIN-113 / 30;

MEDLINB-94092745; PubMed-8268233;

Campbell K.; Collins M.D., East A.K.;

"Nucleotide sequence of the gene coding for Clostridium botulinum (Clostridium argentinense) type G neurotoxin: genealogical compariwith other clostridial neurotoxins.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                BXG_CLOBO
Q60393;
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ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEROPS; M27.002; -.
InterPro; IPR000395; Bontoxilysin.
InterPro; IPR006025; Zn. WTpeptdse.
Pfam; PF01742; Peptidase_M27; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
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                                                                                                                                                                                                                             Clostridium.
                                                                                                                                                                                                                                                    Bacteria;
                                                                                                                                                                                                                                                                           Clostridium botulinum
                                                                                                                                                                                                                                                                                                                                                                                                  01-NOV-1997
01-NOV-1997
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CHAIN
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                                                                                                                                                                                                 NCBI_TaxID=1491;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ProDom; PD001963;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           detected action on small molecule substrates.

COFACTOR: BLAGS 1 zinc ion per subunit (By similarity).

SUBUNIT: DISULFIDE-LINKED HETEROIDMER OF A LIGHT CHAIN (L) AND
HEAVY CHAIN (H). THE LIGHT CHAIN HAS THE PHARMACOLOGICAL ACTIV
HILLE THE N-AND C-TERMINAL OF THE HEAVY CHAIN MEDIATE CHANNEL
FORMATION AND TOXIN BINDING, RESPECTIVELY.

SUBCELLULAR LOCATION: Secreted.
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8; Conser
                                                                                                                                                                                                                                               Firmicutes;
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1 436
BOTULINUM NEUROTOXIN F, LIGHT-CHA
437 1274
BOTULINUM NEUROTOXIN F, HEAVY-CHA
227 227
ZINC (CAPALYTIC) (BY SIMILARITY).
228 228
229 BY SIMILARITY.
220 221 BY SIMILARITY.
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Bontoxilysin; 1.
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57.1%;
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Pred. No.
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(EC 3.4
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HEAVY-CHAIN.
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RESULT 6
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DT 01-JUL
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DE Botuli
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InterPro; IPR006025; Zn_MTpeptdse.
Pfam; PF01742; Peptidase_M27; 1.
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-!- FUNCTION: BOTULINUS TOXIN ACTS BY INHIBITING NEUROTRANSMITTER
                                                                                                                                     BOTA OR BNA OR ATX.
Clostridium botulinum.
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PROSITE; PS00142; ZINC_PROTEASE; 1
     SEQUENCE FROM N.A.
                                                                                Clostridium
                                                                                                         Bacteria; Firmicutes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. No detected action on small molecule substrates.

COFACTOR: Binds 1 zinc ion per subunit (By similarity).

SUBUNIT: Disulfide-linked heterodimer of a light chain (L) and a heavy chain (H). The light chain has the pharmacological activity, while the N- and C-terminal of the heavy chain mediate channel formation and toxin binding, respectively.

SUBCELLULAR LOCATION: Secreted (By similarity).

MISCELLANEOUS: THERE ARE SEVEN ANTIGENICALLY DISTINCT FORMS OF BOTULINUM NEUROTOXIN: TYPES A, B, Cl, D, E, F, AND G.

SIMILARITY: BELONGS TO PEPTIDASE FAMILY M27.
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CATALYTIC ACTIVITY: Limited hydrolysis of proteins of the CATALYTIC ACTIVITY: Synaptobrevins, SNAP25 or synthesis
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MEDLINE-85285016;
Shone C.C., Hamble
"Inactivation of C
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               SEQUENCE OF 1-18 FROM N.A.
STRAIN=Type A NIH;
MEDLINE=96096783; PubMed=8521962;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        MEDLINE=89350959; PubMed=2669749;
Betley M.J., Somers E., Dasgupta B.R.;
"Characterization of botulinum type A neurotoxin gene:
the N-terminal encoding region.";
Biochem. Biophys. Res. Commun. 162:1388-1395(1989).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     East A.K., Bhandari M., Stacey J.M., Campbell K.D., Collins M.D.; "Organization and phylogenetic interrelationships of genes encoding components of the botulinum toxin complex in proteolytic Clostridium botulinum types A, B, and F: evidence of chimeric sequences in the gene encoding the nontoxic nonhemagglutinin component."; Int. J. Syst. Bacteriol. 46:1105-1112(1996).
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                                                                                                                                                                                                                                                                   Dasgupta B.R., Foley J., Niece R "Partial sequence of the light c Biochemistry 26:4162-4162(1987).
                                                                                                                                                                                                                                                                                                                                                      Schmidt J.J., Sartymoorthy V., Dasgu Partial amino acid sequence of the botulinum neurotoxin type A.";
                                                                                                                                                                                                                                                                                                                                                                                                SEQUENCE OF 1-16.
MEDLINE=84178501; PubMed=6370252;
                                                                                                                                                                                   "Botulinum neurotoxin type A: sequence of N-terminus and around the nicking site.";
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Binz B., Kuarzono H., Wille M., Frevent J., Wernars K.,
"The complete sequence of botulinum neurotoxin type A ar
with other clostridial neurotoxins.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       STRAIN-62A;
                                            SEQUENCE OF 448-482
                                                                                                                                                                      Biochimie 72:661-664(1990)
                                                                                                                                                                                                                 Dasgupta B.R., Dekleva M.L.
                                                                                                                                                                                                                             MEDLINE=91120847;
                                                                                                                                                                                                                                           SEQUENCE OF 1-5 AND 444-456
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MEDLINE=90235864; PubMed=2185020;
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 Hambleton P., Melling J.; of Clostridium botulinum
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                            PubMed=3896784;
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f the heavy and light chains
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use by non-profit institutions as long modified and this statement is not removed. entitles requires a license agreement (See or send an email to license@isb-sib.ch).
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MEDLINE=94124495; PubMed=8294407;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           "Crystal structure of botulinum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDLINE=98455071; PubMed=9783750;
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J. Biol. Chem. 269:1617-1620(1994).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       toxicity,",
Struct. Biol. 5:898-902(1998).
FUNCTION: Inhibits acetylcholine release. The botulinum toxi
binds with high affinity to peripheral neuronal presynaptic
                                                                                                                 European Bioinformatics Institute.
                                                                                                                                                                                                                                              DATABASE: NAME=BOTOX product information Web site; WWW="http://www.botox.com/index.jsp?hp&productinfo" DATABASE: NAME=Protein Spotlight; NOTE=Issue 19 of February 2002;
                                                                                                                                                                                                                                                                                                                                                               MISCELLANEOUS: There are seven antigenically distinct botulinum neurotoxin: Types A, B, C1, D, E, F, and G. SIMILARITY: BELONGS TO PEPTIDASE FAMILY M27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             membrane, is then internalized by receptor-mediated endocytosis. The C-terminus of the heavy chain (H) is responsible for the adherence of the toxin to the cell surface while the N-terminus mediates transport of the light chain from the endocytic vesicle to the cytosol. After translocation, the light chain (L) hydrolyzes the 197-Gln-[-Arg-198 bond in SNAP-25, thereby blocking neurotransmitter release. Inhibition of acetylcholine release results in flaccid paralysis, with frequent heart or respiratory
                                                                                                                                                                                                                                                                                                                                                                                                                                                the treatment of strabismus and blepharospasm associated with dystonia and cervical dystonia. Also used for the treatment of hemifacial spasm and a number of other neurological disorders characterized by abnormal muscle contraction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               heavy chain (H).
SUBCELLULAR LOCATION: Secreted.
PHARMACEUTICAL: Available under the name BOTOX (Allergan)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CATALYTIC ACTIVITY: Limited hydrolysis of proteins neuroexocytosis apparatus, synaptobrevins, SNAP25 detected action on small molecule substrates.
                                                                                                                                                                                                                         WWW="http://www.expasy.org/spotlight/articles/sptlt019.html".
                                                                                                                                  SWISS-PROT entry is copyright. It is produced through a collaboration sen the Swiss Institute of Bioinformatics and the EMBL outstation
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R., Niemann H
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Best Local S
Matches 8
                                                                           MEDLINE-92181428; PubMed-1543481; Poulet S., Hauser D., Quanz M., Niemann H., Popoff M.R.; Psequences of the botulinal neurotoxin E derived from Clobulinum type E (strain Beluga) and Clostridium butyricum ATCC 43181 and ATCC 43755)."; Biochem. Biophys. Res. Commun. 183:107-113(1992).
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                 MEDLINE=92174922; PubMed=1541280; Whelan S.M., Elmore M.J., Bodswor
                                                                                                                                                                       STRAIN=Beluga;
MEDLINE=92181428;
                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                            Bacteria; Firmicutes;
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                                                   SEQUENCE FROM N.A.
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PF01742; Peptidase_M27; 1.
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AAA23262.1;
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                   Bodsworth N.J.,
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Y->A: DECREASE
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Clostridium bo
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butyricum (strain
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(4)
SEQUENCE OF 1-13.
MEDLINE-85197963; PubMed-3888113;
Schmidt J.J., Sathyamoorthy V., Dasgupta B.,
Schmidt J.H., Sathyamoorthy V., Dasgupta B.,
Schmidt J.H., Sathyamoorthy V., Dasgupta B.,
Schmidt J.H., Sathyamoorthy V., Dasgupta B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 J. Biol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       IDENTIFICATION OF SUBSTRATE.
MEDLINE=94124495; PubMed=8294407;
Binz T., Blasi J., Yamasaki S., B
EMBL; X62683; CAA44558.
PIR; S21178; S21178.
HSSP; P10845; 3BTA.
MEROPS; M27.002; -.
                                                                                                     the European Bioinformatics Institute. The use by non-profit institutions as int removed. entitles requires a license agreement (See
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Schiavo G., Santtuci A., Dasgupta B.R., Benfenati F., Wilson M.C., Montecucco C
                                                                                                                                                                This SWISS-PROT between the Swi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Botulinum neurotoxins serotypes
COOH-terminal peptide bonds.";
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Binz T., Kurazono H., Wille M., Frevert J., Wernars K., Niemann "The complete sequence of botulinum neurotoxin type A and compas with other clostridial neurotoxins.";
J. Biol. Chem. 265:9153-9158(1990).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SEQUENCE OF 1-251 MEDLINE-90264400;
                                                                                         or send
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Proteolysis of SNAP-25 by types E and A botulinal neurotoxins.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Jahn R., Niemann H.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=94063091;
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                                                                                                                                                                                                   neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntaxin. No detected action on small molecule substrates. COPACTOR: BLOGS I zinc ion per subunit (By similarity). SUBUNIT: DISULFIDE-LINKED HETERODIMER OF A LIGHT CHAIN (L) AND A HEAVY CHAIN (H). THE LIGHT CHAIN HAS THE PHARMACOLOGICAL ACTIVITY, WHILE THE N-AND C-TERMINAL OF THE HEAVY CHAIN MEDIATE CHANNEL FORMATION AND TOXIN BINDING, RESPECTIVELY.
SUBCELLAUGAR LOCATION: Secreted.
MISCELLAUGAR LOCATION: SPECTED ANTIGENICALLY DISTINCT FORMS OF BOTULINUM NEUROTOXIN: TYPES A, B, C1, D, E, F, AND G.
SIMILARITY: BELONGS TO PEPTIDASE FAMILY M27.
                                                                                                                                                                                                                                                                                                                                                                                                   BIOL Chem. 269:1617-1620(1994).
FUNCTION: BOTULINUS TOXIN ACTS BY INHIBITING NEUROTRANSMITTER RELEASE. IT BINDS TO PERIPHERAL NEURONAL SYNAPSES, IS INTERNALI: AND MOVES BY RETROGRADE TRANSPORT UP THE AXON INTO THE SPINAL COMPRETE IT CAN MOVE BETWEEN POSTSYNAPTIC AND PRESYNAPTIC NEURONS.
INHIBITS NEUROTRANSMITTER RELEASE BY ACTING AS A ZINC INHIBITS NEUROTRANSMITTER RELEASE BY ACTING AS A ZINC ENDOPETIDASE THAT CATALYZES THE HYDROLYSIS OF THE 180-ARG-|-ILI
                                                                                                                                                                                                                                                                                                                                                                     181 BOND IN SNAP-25.
CATALYTIC ACTIVITY: Limited hydrolysis of proteins
                                                          X62089; CAA43999.1;
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                                                                                       email to license@isb-sib.ch).
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                                                                                                                                                             ROT entry is copyright. It is produced through a collaboration swiss Institute of Bioinformatics and the EMBL outstation
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Pubmed=2160960;
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01-JUL-1989 (Rel. 11, Creat
01-JUL-1993 (Rel. 26, Last
15-SEP-2003 (Rel. 42, Last
Botulinum neurotoxin type B
                                                             Campbell K., East A.K., Collins M.D.; "Gene probes for identification of the botulinal neurotoxin specific identification of neurotoxin types B, E, and F.";
                                                                                                                                      STRAIN=NCTC 7273;
Szabo E.A., Pemberton
Submitted (APR-1992)
                                                                                                                                                                                  App1.
[2]
                                                                                                                                                                                                        encoding the
nucleotide s
                                                                                                                                                                                                                                              SEQUENCE FROM N.A.
MEDLINE=92384550; PubMed=1514783;
Whelan S.M., Elmore M.J., Bodswor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PRINTS; PR00760; BONTOXILYSIN.
ProDom; PD001963; Bontoxilysin; 1.
PROSITE; PS00142; ZINC_PROTEASE; 1
                                                                                                                                                                                                                                                                                                             Clostridium botulinum Bacteria; Firmicutes;
                                                                                                                                                                                                                                                                                                                                                                                                            BXB_CLOBO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            CHAIN
                               SEQUENCE OF
                                                                                             MEDLINE=94013372; PubMed=8408542;
                                                                                                          STRAIN-NCTC
                                                                                                                    SEQUENCE OF
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                                                                                                                                                                                                                                       Minton
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          MEDLINE=89000987; PubMed=3139097
                                                                                                                                                                                                                                                                                         NCBI_TaxID=1491;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   METAL
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InterPro; IPR006025; Zn_MTpeptdse.
Pfam; PF01742; Peptidase_M27; 1.
                                                                                                                                                                                                                           "Molecular
                                                                                                                                                                                                                                                                                                                                               (Bontoxilysin
                                                    Clin. Microbiol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                 911 YKNFSISFWVRIPNYDNKIVNVNNEYTIINCMRDNNSGWKVSLNHNE---IIWTF
                                                                                                                                                                                            Environ.
                                                                                                                                                                                                                                       N.P.;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          . Similarity
13; Conserv
                                                                                                                                                                                                    he type B neurotoxin sequence.";
                                                                                                                                                                                                                            cloning
                               1-44
                                                                                                                                       Pemberton J.M., APR-1992) to the
                                                                                                                    633-993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              422
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212
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                                                                                                                                                                                            Microbiol.
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                               AND
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1250
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963
                                                                                                                                                                                                                           of the Clostridium
                                                                                                                    FROM
                                                    31:2255-2262(1993).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    31.5%;
                               441-466
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                                                                                                                                                                                                                                                                                                                                                                  Created)
Last sequence up
Last annotation
                                                                                                                                                                                                                                                                                                                Clostridia;
                                                                                                                                                                       N.A.
                                                                                                                    N.A.
                                                                                                                                                                                            58:2345-2354(1992)
                                                                                                                                                                                                                                                Bodsworth N.J., Brehm
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R -> G (IN REF. 2).

C -> S (IN REF. 2 AND 3).

R -> A (IN REF. 2).

I -> L (IN REF. 2).

FE -> LQ (IN REF. 2).

R -> A (IN REF. 2).

N -> NN (IN REF. 2).
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                                                                                                                                       Desmarchelier P.M
EMBL/GenBank/DDBJ
                                                                                                                                                                                                                                                                                                                                                        precursor
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Pred. No. 3
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BOTULINUM
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BY SIMILARITY.
ZINC (CATALYTIC)
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                                                                                                                                                                                                                  determination
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(EC 3.4.
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NEUROTOXIN
PALYTIC) (BY
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N E, HEAVY-CHA
Y SIMILARITY).
                                                                                                                                                                                                                  of its
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HEAVY-CHAIN.
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PDB;
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PDB;
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                                                                                                                                                                                                                                                                                                                                                                                                               EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         This
               InterPro; IPR000395; Bontoxilysin.
InterPro; IPR006025; Zn_MTpeptdse.
Pfam; PF01742; Peptidase. M27; 1.
PRINTS; PR00760; BONTOXILYSIN.
                                                                                                                     MEROPS;
                                                                                                                                                                                                                                                                                                                                                                                        PIR;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       use
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-i- FUNCTION: BOTULINUS TOXIN ACTS BY INHIBITING NEUROTRANSMITTER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 J. Biol.
[7]
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                                                                                                                                                                                                                                                                                                                                                                                                                                                               EMBL;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              SEQUENCE OF 1-16 AND 441-458 STRAIN=OKRA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              IDENTIFICATION OF SUBSTRATE.
MEDLINE=93063293; PubMed=1331807;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Schiavo G., Rossetto O., Santucci A., Dasgupta "Botulinum neurotoxins are zinc proteins."; J. Biol. Chem. 267:23479-23483(1992).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          IDENTIFICATION AS ZINC-PROTEASE. MEDLINE=93054694; PubMed=1429690;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Schmidt J.J., Sathyamoorthy V., Dasgupta B.R., "Partial amino acid sequences of botulinum neu
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Schiavo
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Arch. Biochem.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               6
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the Event European Bioinformatics Institute. There are no resti
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 FUNCTION: BOTULINUS TOXIN ACTS BY LINHIBITING TOXIN ACTS BY LINHIBITING TOXIN ACTS BY LINHIBITING TOXIN ACTS BY RETROGRADE TRANSPORT UP THE AXON INTO THE WHERE IT CAN MOVE BETWEEN POSTSYNAPTIC AND PRESYNAPTIC INHIBITS REUROTRANSMITTER RELEASE BY ACTING AS A ZINC ENDOPEPTIDASE THAT CLEAVES THE 76-GLN-|-PHE-77 BOND OF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FORMATION AND TOXIN BINDING, RESPECTIVELY.
SUBCELLAUGAR LOCATION: Secreted.
MISCELLAUGUS: THERE ARE SEVEN ANTIGENICALLY DISTINCT
BOTULINUM NEUROTOXIN: TYPES A, B, C1, D, E, F, AND G.
SIMILARITY: BELONGS TO PEPTIDASE FAMILY M27.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         CATALYTIC ACTIVITY: Limited hydrolysis of proteins of the neuroexocytosis apparatus, synaptobrevins, SNAP25 or syntax detected action on small molecule substrates. COFACTOR: Binds 1 zinc ion per subunit (By similarity). SUBUNIT: DISULFIDE-LINKED HETERODIMER OF A LIGHT CHAIN (L) HEAVY CHAIN (H). THE LIGHT CHAIN HAS THE PHARMACOLOGICAL ACTIONAL THE N-AND C-TERMINAL OF THE HEAVY CHAIN MEDIATE CHANN
                                                                                                                                                                                       1F31;
1F82;
1F83;
1FQH;
1G9A;
1G9B;
1G9C;
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Z11934;
X70817;
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                                                                                                                                                             40; A48940.

01-NOV-00.

01-NOV-00.

16-AUG-00.

16-AUG-00.

06-DEC-00.

13-NOV-02.

13-NOV-02.

13-NOV-02.
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CAA50148.1;
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RESULT 9
GON1_MOUSE
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Best Local S
Matches
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F13562;

P13562;

01-JAN-1990 (Rel. 13, Created)

01-JAN-1990 (Rel. 13, Last sequence update)

28-FEB-2003 (Rel. 41, Last annotation update)

Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)

(Lutenizing hormone-releasing hormone I) (Gonadotropin-releasing

(Lutenizing formone-releasing hormone I) (Gonadotropin-releasing

(Lutenizing hormone) (Gonadotropin-releasing
                                                  InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
Pfam; PF00446; GnRH; 1.
PRINTS; PR01541; GONADOLIBRNI.
PROSITE; PS00473; GNRH; 1.
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CONFLICT
CONFLICT
CONFLICT
SEQUENCE
                                                                                                                                                                                      EMBL; M14872; AAA37717.1;
PIR; A47578; RHMSG.
MGD; MGI:95789; Gnrh.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                   This
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ACT_SITE
Cleavage on pair of basic residues; Placenta; Signal; Pyrrolidone carbo;
                                                                                                                                                                                                                                                                                                or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SEQUENCE FROM N.A.

MEDLINE=87069928; PubMed=3024317;

MASON A.J., Hayflick J.S., Zoeller R.T., Young W.:

Phillips H.S., Nikolics K., Seeburg P.H.;

Phillips H.S., Nikolics K., Seeburg P.H.;

"A deletion truncating the gonadotropin-releasing
                                                                                                                                                                                                                                                                                                                            entities requires a
                                                                                                                                                                                                                                                                                                                                                   use by non-profit institutions as long amodified and this statement is not removed.
                                                                                                                                                                                                                                                                                                                                                                                                           the European
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        <del>-</del>
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   responsible for hypogonadism in the Science 234:1366-1371(1986).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                GNRH1 OR GNRH.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Eukaryota;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Mus musculus (Mouse).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SUBCELLULAR LOCATION: Secreted. SIMILARITY: Belongs to the GNRH family.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               FUNCTION: STIMULATES THE SECRETION
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   THE SECRETION OF BOTH LUTEINIZING
                                                                                                                                                                                                                                                                                                                                                                            SWISS-PROT entry is copyright. It is produced through a collaboration een the Swiss Institute of Bioinformatics and the EMBL outstation - EDUTOPEAN BOINFORMATICS INSTITUTE ARE NOT RESTRICTED IN THE SWISS INSTITUTE AND THE SWISS INSTITUTE AND THE SWISS INSTITUTE AND THE SWISS IN THE SWISS IN
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Eutheria;
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Rodentia;
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64.3%;
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BY SIMILARITY.
ZINC (CATALYTIC) (BY SIN
INTERCHAIN (PROBABLE).
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R -> G (IN REF. 2).
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A -> S (IN REF. 4).
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Sciurognathi; Muridae;
  carboxylic acid
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N B, HEAVY-CHA:
Y SIMILARITY).
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HEAVY-CHAIN.
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                              Hypothalamus;
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RESULT 11
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Best Local
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071024;
15-DEC-1998
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15-DEC-1998
BXE_CLOBU STANDARD;
p30995;
01-JUL-1993 (Rel. 26, Created)
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ACT_SITE
                                                                                                                                                                                                                                                                                                                                           use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entitles requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            and between the orbiviruses.";
Virus Res. 53:53-73(1998).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Williams C.F., Inoue T., Lucus A.-M., Zanotto P., Roy P.; "The complete sequence of four major structural proteins of horse sickness virus serotype 6: evolutionary relationships
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Outer capsid S2 OR L2.
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CHAIN
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Viruses; dsRNA viruses;
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SIMILARITY: BELONGS TO THE REOVIRUSES VP2 FAMILY.
                                                                                                                                                                                                                                                                                                                                                                                                            European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                           SWISS-PROT entry is copyright. It is produced through sen the Swiss Institute of Bioinformatics and the EM
                                                                                                                                                                                                                                                               protein
                                                                                                                                                                                                                                                                                                               AF021235; AAC40994.1;
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nilarity 47.6%;
Conservative
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(Rel. 37, Last sequence up
(Rel. 37, Last annotation
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Pred. No. 0.
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PYRROLIDONE CARBOXYLIC
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GONADOLIBERIN I.
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     EMBL; X53180; C....
PIR; JH0256; JH0256.
HSSP; P10845; 3BTA.
                                                                                                                                                                                                                                              modified
entities
                           InterPro; IPR000395; Bontoxilysin.
InterPro; IPR006025; Zn_MTpeptdse.
Pfam; PF01742; Peptidase_M27; 1.
PRINTS; PR00760; BONTOXILYSIN.
PrODOm; PD001963; BONTOXILYSIN; 1.
PROSITE; PS00142; ZINC_PROTEASE; 1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     01-JUL-1993 (Rel. 26, Last sequence update) 28-FEB-2003 (Rel. 41, Last annotation updat Botulinum neurotoxin type E precursor (EC 3
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gimenez J., Foley J., Dasgupta B.R., "Neurotoxin type E from Clostridium partial sequence and comparison.";
                                                                                                                                                                                                                             or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                             the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             FASEB J. 2:A1750-A1750(1988).
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                                                                                                                                                                                              EMBL;
                                                                                                                                                                                                                                                                                                               between
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Fujii N., Kimura K., Murakami T.,
Yokosawa N., Yashiki T., Oguma K.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Biochem. Biophys. Res.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         NCBI_TaxID=1492;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE OF 1-48
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         MEDLINE=91237316; PubMed=2033376;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              STRAIN-BL6340;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SEQUENCE OF 1-251 FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (Bontoxilysin E)
                                                                                                                                                                             X62088; CAA43998.1;
X53180; CAA37321.1;
 Transmembrane;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Commun.
                  Hydrolase;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            .
R.
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                  Metalloprotease;
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SEQUENCE FROM N.A.
STRAIN-ATCC 43181, and ATCC 43755;
MEDLINE-92181428; PubMed-1543481;
Poulet S., Hauser D., Quanz M., Niemann H., Popoff M.R.;
"Sequences of the botulinal neurotoxin E derived from Clo
botulinum type E (strain Beluga) and Clostridium butyric
ATCC 43181 and ATCC 43755).";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    "Cloning of a DNA fragment encoding the 5'-terminus of the botype E toxin gene from Clostridium butyricum strain BL6340."; J. Gen. Microbiol. 137:519-525(1991).
                                                                                                                                                                                                                  HEAVY CHAIN (H). THE LIGHT CHAIN HAS THE PHANMACOLOGICAL ACTIVITY, WHILE THE N-AND C-TERMINAL OF THE HEAVY CHAIN MEDIATE CHANNEL FORMATION AND TOXIN BINDING, RESPECTIVELY.

SUBCELLULAR LOCATION: Secreted.
MISCELLANBOUS: THERE ARE SEVEN ANTIGENICALLY DISTINCT FORMS OF BOTULINUM NEUROTOXIN: TYPES A, B, C1, D, E, F, AND G.

SIMILARITY: BELONGS TO PEPTIDASE FAMILY M27.
                                                                                                                             s SWISS-PROT entry is copyright. It is produced through ween the Swiss Institute of Bioinformatics and the EN European Bioinformatics Institute. There are no resta
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        ENDOPEPTIDASE.

CATALYTIC ACTIVITY: Limited hydrolysis of paratus, synaptobrevins, conservat
                                                                                                                                                                                                                                                                                                                                                                                                                      detected action on small molecule substrates.

COFACTOR: Binds 1 zinc ion per subunit (By similarity).

SUBUNIT: DISULFIDE LINKED HETERODIMER OF A LIGHT CHAIN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  RELEASE. IT BINDS TO PERIPHERAL NEURONAL SYNAPSES, IS I AND MOVES BY RETROGRADE TRANSPORT UP THE AXON INTO THE WHERE IT CAN MOVE BETWEEN POSTSYNAPTIC AND PRESYNAPTIC INHIBITS NEUROTRANSMITTER RELEASE BY ACTING AS A ZINC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          FUNCTION: BOTULINUS TOXIN ACTS BY INHIBITING
rmatics Institute. There are no resi
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Clostridia; Clostridiales; Clostridiaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               183:107-113(1992).
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(EC 3.4
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3.4.24.69) (BONT/E)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Tsuzuki
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        proteins, SNAP25
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      and C.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NEUROTRANSMITTER
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      butyricum;
                                                                                                                                restrictions
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IC NEURONS. IT
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                                                                                                                                                                                    a collaboration
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                                                                  RA East A.K., Bhandari M., Stacey J.M., Campbell K.D., Collins M.D.;

RT "Organization and phylogenetic interrelationships of genes encoding components of the botulinum toxin complex in proteolytic Clostridium proteolytic clostridium toxin components.";

RT components of the botulinum toxin complex in proteolytic Clostridium proteolytic clostridium toxin components.";

RT gene encoding the nontoxic nonhemagylutinin component.";

RI Int. J. Syst. Bacteriol. 46:1105-1112(1996).

C. --- FUNCTION: Inhibits acetylchollne release. The botulinum toxin binds with high affinity to peripheral neuronal presynaptic membrane, is then internalized by receptor-mediated endocytosis.

C. The C-terminus of the heavy chain (H) is responsible for the adherence of the toxin to the cell surface while the N-terminus of the diates transport of the light chain from the endocytic vesicle to the cytosol. After translocation, the light chain (L) hydrolyzes the 197-Gln-|-Arg-198 bond in SNAP-25, thereby blocking neurotransmitter release. Inhibition of acetylcholine release crasults in flaccid paralysis, with frequent heart or respiratory cannot support to the cytosis. Supportation of proteins of the components. Support to support to the cytosis supportation.
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Best Local S
Matches 15
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Q45894; P77780;
Q45894; P77780;
Q45894; P77780;
28-FEB-2003 (Rel. 41, Created)
28-FEB-2003 (Rel. 41, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Botulinum neurotoxin type A precursor (EC 3.4.24.69) (BoNT/A)
(Bontoxilysin A) (BOTOX) [Contains: Botulinum neurotoxin A, 1:
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CHAIN
METAL
ACT_SITE
METAL
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                                                                                                                                                                                                                                                                                                                                                                                                                          Willems A., East A.K., Lawson P.A., Collins M.D.;
"Sequence of the gene coding for the neurotoxin of Clostridium botulinum type A associated with infant botulism: comparison with other clostridial neurotoxins.";
Res. Microbiol. 144:547-556(1993).
                                                                                                                                                                                                                                                                                                                                                                 MEDLINE=97016817; PubMed=8863443;
                                                                                                                                                                                                                                                                                                                                                                                   STRAIN=Kyoto-F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN=Kyoto-F;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Clostridium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Bacteria; Firmicutes;
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Clostridium botulinum
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    NCBI_TaxID=1491;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE-94143603; PubMed-8310180;
              SUBUNIT: heavy cha
                        neuroexocytosis apparatus, synaptobrevins, SI detected action on small molecule substrates SUBUNIT: Disulfide-linked heterodimer of a li
 SUBCELLULAR
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             CLOBO
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                chain
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              (H) (By similarity).
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Pred.
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BOTULINUM NEUROTOXIN E, HEAVY-CHA
ZINC (CATALYTIC) (BY SIMILARITY).
BY SIMILARITY.
ZINC (CATALYTIC) (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         INTERCHAIN (PROBABLE).
K -> M (IN REF. 2).
W; 8171B5B2C2312857 CRC64;
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                              light chain (L)
                                                             SNAP25
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E, HEAVY-CHAI
SIMILARITY).
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                                                            or syntaxin.
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Best Local
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01-APR-1988 (Rel. 07, Last sequence update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GnRH I) (Luliberin I) (Gonadorelin); GnRH-associated peptide I).
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ACT_SITE
MEDIINE-86094338; PubMed-2867548;
Adelman J.P., Mason A.J., Hayflick J.S., Seeburg P.H.;
Adelman of the gene and hypothalamic cDNA for the common
of gonadotropin-releasing hormone and prolactin release-inhi
                                                                                          SEQUENCE FROM N.A.
                                                                                                                                                                                          MEDLINE=89366682; PubMed=2671939;
Hayflick J.S., Adelman J.P., Seeburg P.H
"The complete nucleotide sequence of the
                                                                                                                                                                                                                                                                                                                                         Homo sapiens (Human).
Eukaryota; Metazoa; C
Mammalia; Eutheria; F
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   InterPro; IPR000395; Bontoxilysin.
InterPro; IPR006025; Zn_MTpeptdse.
Pfam; PF01742; Peptidase_M27; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                EMBL; X73423; CAA51824.1;
EMBL; X87974; CAA61234.1;
PIR; I40645; I40645.
HSSP; P10845; 3BTA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            the European Bioinformatics Institute. There are no restrictions on its use by non-profit institutions as long as its content is in no way modified and this statement is not removed. Usage by and for commercial entities requires a license agreement (See http://www.isb-sib.ch/announce/or send an email to license@isb-sib.ch).
                                                                                                                                                 Nucleic Acids
                                                                                                                                                                    hormone
                                                                                                                                                                                                                                                                  SEQUENCE FROM
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                                                                                                                                                                                                                                                                                                                                                                                                              GNRH1 OR GNRH OR LHRH.
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PROSITE; PS00142; ZINC_PROTEASE; FALSE_NEG
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botulinum neurotoxin: Types A, B, Cl, D, E, F, and G.
-!- SIMILARITY: BELONGS TO PEPTIDASE FAMILY M27.
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                                                                                                                                                                  gene.";
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                                                                                                                                                                                                                                                                                                                                      ; Metazoa; Chordata; Craniata; Vertebrata; l
Eutheria; Primates; Catarrhini; Hominidae;
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50.0%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             BOTULINUM NEUROTOXIN A, LIGHT-CHAIN BOTULINUM NEUROTOXIN A, HEAVY-CHAIN ZINC (CATALYTIC) (BY SIMILARITY). BY SIMILARITY (BY SIMILARITY). INTERCHAIN (BY SIMILARITY). INTERCHAIN (BY SIMILARITY). BY SIMILARITY. BY SIMILARITY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   MW;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Score 56;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BY SIMILARITY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              POTENTIAL
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
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  and prolactin release-inhibiting
                                                                                                                                                                         +he human
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7.7;
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                                                                                                                                                                                             gonadotropin-releasing
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                                                                                                                                                                                                                                                                                                                                                                 Euteleostomi;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           HEAVY-CHAIN.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL outstation
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Cleavage on pair or Cleavage or Cl
                                                                                                                                                                                      GO; GO:0005625; C:soluble fraction; TAS.
GO; GO:0005183; F:luteinizing hormone-releasing
GO; GO:0007267; P:cell-cell signaling; TAS.
GO; GO:0007275; P:development; TAS.
GO; GO:0007275; P:development; TAS.
GO; GO:0008285; P:negative regulation of cell pr
GO; GO:0007155; P:signal transduction; TAS.
InterPro; IPR004079; GORRH.
InterPro; IPR004079; GORRH.
InterPro; IPR004079; GORRH.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an entities requires a license agreement (See http://www.isb-or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nat.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  MEDIINE-99318093; PubMed-10391209;
Cargill M., Altshuler D., Ireland J., Sklar P.,
Shaw N., Lane C.R., Lim E.P., Kalyanaraman N., I
Friedland L., Rolfe A., Warrington J., Lipshutz
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Nature
[4]
                                                                                                                                              PRINTS; PRO1541; GONADOLIBRNI. PROSITE; PS00473; GNRH; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                    EMBL; X01059; CAA25526.1;
EMBL; M12578; AAA35916.1;
EMBL; X15215; CAA33285.1;
EMBL; S05308; RHHUG.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Shaw N., Lane C.R., Friedland L., Rolfe
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    biosynthesized in the human placenta.";
Biochem. Biophys. Res. Commun. 109:1061-1071(1982)
                                                                                                                                                                                                                                                                                                                                                                                                                                       Genew;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        the European Bioinformatics Institute.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            This
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               "Characterization of cDNA for precursor of releasing hormone.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SEQUENCE FROM N.A., AND VARIANT S
MEDLINE=85012739; PubMed=6090951;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   between
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Tan L., Rousseau P.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDLINE-83126573;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  factor
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             . Genet. 23:373-373(1999).
FUNCTION: STIMULATES THE SECRETION OF
THE SECRETION OF BOTH LUTEINIZING AND
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SIMILARITY: Belongs to the GNRH family
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        PHARMACEUTICAL: Available under
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   SUBCELLULAR LOCATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Lutrepulse or Lutrelef (Ferring
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            HORMONES
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                                                                                                                                                                                                                                                                                                                                                                                                                 152760;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SWISS-PROT entry is copyright. It is produced through a collaboration sen the Swiss Institute of Bioinformatics and the EMBL outstation -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Natl.
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                                                                         pair of basic residues;
harmaceutical; Signal; Po
carboxylic acid.
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                                                                                                                                                                                                                                                                                                                                                                                                                                     GNRH1.
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       PROGONADOLIBERIN GONADOLIBERIN I.
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                                                                                                  Polymorphism;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  the names Factrel (Ayerst Labs), Pharmaceuticals) and Relisorm
                                                                                                                           Hormone;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Lipshutz
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GONADOTROPINS; IT STIMULATES FOLLICLE-STIMULATING
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   http://www.isb-sib.ch/announce/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     human luteinizing
                                                                                                                           Amidation;
                                                                                                                                                                                                                                                                                         proliferation;
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                                                                                                                                                                                                                                                                                                                                                                factor
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sh J., Ziaugra L.
Daley G.Q.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        restrictions
                                                                                                                                                                                                                                                                                                                                                              activity;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   peptide
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                                                                                                                           Hypothalamus;
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G.Q.,
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RESULT 14
BXC1_CLOBO
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ARDLINE-94013966; Pubmed-7901002;

AB Blasi J., Chapman E.R., Yamasaki S., Binz T., Niemann H., Jahn R.;

AB Blasi J., Chapman E.R., Yamasaki S., Binz T., Niemann H., Jahn R.;

AB Blasi J., Chapman E.R., Yamasaki S., Binz T., Niemann H., Jahn R.;

AB Blasi J., Chapman E.R., Yamasaki S., Binz T., Niemann H., Jahn R.;

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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          SEQUENCE FROM N.A.

STRAIN-Type C Stockholm / C-ST;

STRAIN-Type C Stockholm / C-ST;

MEDLINE-91024998; PubMed-2222445;

MEDLINE-91024998; PubMed-2222445;

MINIMA K., Fujii N., Tsuzuki K., Murakami T., Indoh

Yokosawa N., Takeshi K., Syuto B., Oguma K.;

"The complete nucleotide sequence of the gene codir

type C1 toxin in the C-ST phage genome.";

Type C1 toxin in the C-ST phage genome.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 01-NOV-1990 (Rel. 16, Created)
01-NOV-1990 (Rel. 16, Last sequence upo
28-FEB-2003 (Rel. 41, Last annotation u
Botulinum neurotoxin type C1 precursor
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ACT_SITE
                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-Type C Stockholm / C-ST;
MEDLINE-88153072; PubMed=2450068;
Tsuzuki K., Yokosawa N., Syuto B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Bacteria; Firmicutes;
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P18640;
                                                                                                                                                                                                                                                                                                                                        common to Clostridium
                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 2-25.
STRAIN-Type C Sto
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SEQUENCE FROM N.A.
MEDLINE=90370487; PubMed
Hauser D., Eklund M.W.,
Boquet P., Popoff M.R.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Clostridium
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                                                                                                                                                                                                                                                                                                                      tetanus
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                                                                                                                                                                                                                                                                                                                                                           Establishment of
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                                                                                                                                                                                                                                                                                                     Immun.
                                                                                                                                                                                                                                                                                                                      toxin.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         sequence of Clostridium botulinum ds Res. 18:4924-4924(1990).
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33
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26
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                                                                                                                                                                                                                                                                                                     56:898-902(1988).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                STANDARD;
                                                                                                                                                                                                                                                                                                                                      a monoclonal antibody dium botulinum type B,
                                                                                                                                                                                                                                                              SUBSTRATE
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M.W., Kurazona
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73.3%;
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W-> S (IN dDSNP:6185).
/FIId=VAR_013943.
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r (EC 3.4.24.69) (BONT/C1)
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Best Local S
Matches 12
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01-CCT-1996 (Rel. 34, Created)
01-CCT-1996 (Rel. 34, Last sequence update)
01-CCT-1996 (Rel. 41, Last annotation update)
28-FEB-2003 (Rel. 41, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I (LH-RH I)
(Luteinizing hormone-releasing hormone I) (Gonadotropin-releasing hormone I) (GnRH I) (Luliberin I); GnRH-associated peptide I]
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    SEQUENCE
                                                                                                                                                              Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Eutele
Mammalia; Eutheria; Primates; Catarrhini; Cercopithecidae;
                                                                                                                                                                                                                                           Macaca mulatta (Rhesus macaque).
                                                                                                                                                                                                                                                                                          GNRH1 OR GNRH OR LHRH.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       <u>:</u>
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InterPro; IPR006025; Zn_MTpeptdse.
Pfam; PF01742; Peptidase_M27; 1.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      SUBCELLULAR LOCATION: Secreted.

MISCELLANEOUS: THERE ARE SEVEN ANTIGENICALLY DISTINCT FORMS OF BOTULINUM MEUROTOXIN: TYPES A, B, Cl, D, E, F, AND G.

MISCELLANEOUS: BOTULINUM TYPE C1 NEUROTOXIN IS SYNTHESIZED BY STRAIN OF CLOSTRIDIUM BOTULINUM WHICH CARRY THE APPROPRIATE
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           COFACTOR: Binds 1 zinc ion per subunit (By similarity).
SUBUNIT: DISULFIDE-LINNED HETERODIMER OF A LIGHT CHAIN (L) AND A
HEAVY CHAIN (H). THE LIGHT CHAIN HAS THE PHARMACOLOGICAL ACTIVITY,
WHILE THE N-AND C-TERMINAL OF THE HEAVY CHAIN MEDIATE CHANNEL
FORMATION AND TOXIN BINDING, RESPECTIVELY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  SIMILARITY: BELONGS TO PEPTIDASE FAMILY M27.
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x72793;
x53751;
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Pred. No. 12;
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BOTULINUM NEUROTOXIN C1, HEAVY-CH
ZINC (CATALYTIC) (BY SIMILARITY).
BY SIMILARITY.
ZINC (CATALYTIC) (BY SIMILARITY).
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P -> T (IN REF. 2).
W; 71FBE379F97129E8 CRC64;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
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                                                                                                                                                                                                                                                                                                                                                         or send an email to license@isb-sib.ch).
                                                                                                                                                                                                                                                                                                                                                                              use by non-profit institutions as long as its content modified and this statement is not removed. Usage by an
                                                                                                                                                                                                                                                                                                                                                                                                   This SWISS-PROT entry is copyright. It is produced through a collaboration between the Swiss Institute of Bioinformatics and the EMBL outstation the European Bioinformatics Institute. There are no restrictions on it
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Neuroendocrinology 60:346-359(1994).
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Ma Y.J., Costa M.E., Ojeda S.R.; "Developmental expression of the genes encoding transforming growth factor alpha and its receptor in the hypothalamus of female rhesus
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Search completed: September 24, 2003, 17:41:17 Job time : $7.41025 \ secs$

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Result
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sp_unclassified:*
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093n27 clostridium
045851 clostridium
057236 clostridium
045848 clostridium
045846 clostridium
09x708 clostridium
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0933K0 clostridium
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0933K0 clostridium
093077 clostridium
09x701 pseudomonas
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Q90y63
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ALIGNMENTS

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RESULT
Q93N27
ID Q9
AC Q9
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Q93N27;
01-DEC-2001 (TrEMBLrel. 19, Created)
                                                                                                                                                Clostridium tetani.
Bacteria; Firmicutes; Clostridia; Clostridiales; Clostridiaceae;
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                                                                                                                                                                                                                                                                                            Tetanus toxin (Fragment).
                                                                                                                                                                                                                                                      NCBI_TaxID=1513;
                                                                           1 FNNFTVSFWLRVPKVSASHLE
                                                                                                    Similarity 100.
21; Conservative
                                                                 FNNFTVSFWLRVPKVSASHLE 103
                                                                                                                                         451 AA;
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100.0%; Pr
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0; Mismatches 0;
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Q45851;
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SEQUENCE
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Bacteria; Firmicutes;
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InterPro; IPR001064; Crystallin.
InterPro; IPR006025; Zn_MTpeptdse.
Pfam; PF01742; Peptidase_M27; 1.
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MEDLINE-9325228; PubMed-8486245;

Thompson D.E., Hutson R.A., East A.K., Allaway D.,

Richardson P.T.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   NCBI_TaxID=1561;
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PRODOM; PD001963; BONTOXILYSIN:
PROSITE; PS00225; CRYSTALLIN_BETAGAMMA;
PROSITE; PS00142; ZINC_PROTEASE; 1.
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01-MAR-2003 (TrEMBLrel.
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21; Conservative (
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YONFSVSFWVRIPK 935
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23,
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Last sequence update)
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                                                                                 Score 62; DB Pred. No. 5.3; 4; Mismatches
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5.3;
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BONT/B Botulinum

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type

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RESULT 4
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Best Local
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EMBL; X81714; CAA57358.1; -
EMBL; X5496; AAA23210.1; -
EMBL; X70821; CAA50152.1; -
EMBL; X70821; CAA50152.1; -
EMBL; X99064; CAA67512.1; -
HSSP; P10845; 3BTA.
MEROPS; M27.002; -
                                 Q45848; PRELIMINARY;
Q45848; O1-NOV-1996 (TrEMBLrel. 01,
01-NOV-1996 (TrEMBLrel. 01,
01-OCT-2000 (TrEMBLrel. 15,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      InterPro; IPR000395; Bontoxilysin.
InterPro; IPR006025; Zn_MTpeptdse.
Pfam; PF01742; Peptidase_M27; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                specific identification of neurotoxin types J. Clin. Microbiol. 31:2255-2262(1993).
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            MEDLINE=98404102; PubMed=9732534;
East A.K., Bhandari M., Hielm S., Collins M.D.;
"Analysis of the botulinum neurotoxin type F gene clu
proteolytic and nonproteolytic Clostridium botulinum
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 SEQUENCE OF 1-27 FROM N.A. STRAIN=LANGELAND;
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STRAIN=NCTC 1028;
MEDLINE=94013372; Pul
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN=NCTC 10281;
Hutson R.A., Collins
Submitted (AUG-1995)
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Q57236; Q45863;
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ZINC_PROTEASE; 1
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57.1%;
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Pred. No. 7
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otulinum and Clostridium
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RESULT 7
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Q9X708 PRELIMINARY;
Q9X708;
Q9X708;
Q1-NOV-1999 (TrEMBLrel. 12, C
Q1-NOV-1999 (TrEMBLrel. 12, L
Q1-DEC-2001 (TrEMBLrel. 19, L
Botulinum neurotoxin type B (
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 MEDIJINE-94013372; PubMed-8408542;
Campbell K., East A.K., Collins M.D.;
"Gene probes for identification of the botulinal neurotoxin gene specific identification of neurotoxin types B, E, and F.";
J. Clin. Microbiol. 31:2255-2262(1993).
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01-NOV-1996 (TrEMBLrel. 01,
01-NOV-1996 (TrEMBLrel. 01,
01-OCT-2000 (TrEMBLrel. 15,
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EMBL; X70819; CASO150.1; -.
EMBL; X70819; CASO150.1; -.
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Clostridium
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361 AA;
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  Last sequence update)
Last annotation update)
(Fragment).
                                                                                                                                                                                                                                                                                                            Score 58; DB Pred. No. 4.9; 4; Mismatches
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Pred. No.
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InterPro; IPR006025; Zn_WTpeptdse.
Pfam; PF01742; Peptidase_M27; 1.
ProDom; PD001963; Bontoxilysin; 1.
PROSITE; PS00142; ZINC_PROTEASE; 1
SEQUENCE 1291 AA; 150840 MW; E
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Bacteria; Firmicutes;
Clostridium.
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EMBL; Y13630; CAA73968.1; -.
HSSP; P10845; 3BTA.
                                                                                                                                                                                                                               Santos-Buelga J., Collins M.D., East A.K.; "Characterization of the genes encoding the Botulinum neurotoxin complex in a strain of clostridium botulinum producing type B & J neurotoxins.";
                                                                                                                                                                                                                                                                   STRAINE= 200 3281;
MEDLINE= 98440323; PubMed= 9767710;
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01-MAY-1999 (TrEMBLrel.
01-MAY-1999 (TrEMBLrel.
01-MAR-2003 (TrEMBLrel.
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J. Cell Sci. 112:2715-2724(1999).
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InterPro; IPR006025; Zn_MTpeptdse.
Pfam; PF01742; Peptidase_M27; 1.
PRINTS; PR00760; BONTOXILYSIN; 1.
ProDom; PD001963; Bontoxilysin; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                  Kirma N., Ferreira J.L., Baumstark B.R.; "Characterization of six type A strains of Clostridium botulinum contain type B toxin gene sequences."; Submitted (AUG-2000) to the EMBL/GenBank/DDBJ databases. EMBL; AF300466; AALI1499.1; EMBL; AF300465; AALI1498.1; -.
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STRAIN=593, and 588;
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ProDom; PD001963; Bontoxilysin; 1.
PROSITE; PS00142; ZINC_PROTEASE; 1
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Hutson R.A., Collins M.D., East A.K., Thomp
"Nucleotide sequence of the gene coding for
Clostridium botulinum type B neurotoxin: co
clostridial neurotoxins";
Curr. Microbiol. 28:101-110(1994).
EMBL; X71343; CAA50482.1; -.
HSSP, P10845; 3BTA.
MEROPS; M27.002; -.
InterPro; IPR000395; Bontoxilysin.
InterPro; IPR006255; Zn_MTpeptdse.
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01-MAR-2003 (Tremblrel. (
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botulism.";
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PRINTS; PR00760; BONTOXILYSIN.
ProDom; PD001963; Bontoxilysin; 1.
PROSITE; PS00142; ZINC_PROTEASE; 1
SEQUENCE 1291 AA; 150513 MW; 7
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NCBI_TaxID=1491;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Clostridium botulinum. Bacteria; Firmicutes;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  BONT/B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   BONT/B
  923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    923
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          1 FNNFTVSFWLRVPK
                                                                             Similarity
9; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Similarity 9; Conserv
FLDFSVSFWIRIPK
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    FLDFSVSFWIRIPK 936
                                     FNNFTVSFWLRVPK
                                                                                                                                                               1291
                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3 (TrEMBLrel.
3 (TrEMBLrel.
3 (TrEMBLrel.
                                                                               Conservative
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                             nda T., Morimoto F.,
Mukamoto M., Kozaki
                                                                                                                                                             AA;
                                                                                                31.2%;
64.3%;
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                                                                                                                                                               150574
                                                                                                                                                                                                                                                                                                                                                                                       Clostridia;
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                                                                                                                                                             MW;
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Last annotation update)
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Last sequence update)
Last annotation update)
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                                                                                                  Pred. No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     PRT;
                                                                             Mismatches
                                                                                                                                                                                                                                                               Tsukamoto S.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Mismatches
                                                                                                                                                             0227CAEF4F58504D CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               1.
71BCAFE23D69FAAA CRC64;
                                                                                                                                                                                                                                                                                                                                                                                       Clostridiales; Clostridiaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Clostridiales; Clostridiaceae;
                                                                                                                     58;
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                                                                                                DB
20;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB
                                                                                                                                                                                                                                            associated with infant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    AA
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                                                                                                                     Length 1291;
                                                                                                                                                                                                                                                                                    Karasawa
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                                                                               0;
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                                                                               Gaps
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                                                                               0;
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RESULT
OPERATOR
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Q9XAV1
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Query Match
                                                                                  Hading C.-H., Kleser T., Larke L., Mulphy L., Clarke S., Rabbinowitsch E., Rajandream M.A., Rutherford K., Rutter S., Rabbinowitsch E., Rajandream M.A., Rutherford K., Rutter S., Seeger K., Saunders D., Sharp S., Squares R., Squares S., Tayl Seeger K., Wietzorrek A., Woodward J., Barrell B.G., Parkhill
                                                                                                                                 Bentley S.D., Chater K.F., Cerdeno-Tarraga A.-M., Challis G.L.,
Thomson N.R., James K.D., Harris D.E., Quall M.A., Kleser H.,
Harper D., Bateman A., Brown S., Chandra G., Chen C.W., Collins M.,
Cronin A., Fraser A., Goble A., Hidalgo J., Hornsby T., Howarth S.,
Huang C.-H., Kleser T., Larke L., Murphy L., Oliver K., O'Neil S.,
                                                                                                                                                                                                                                                                                                                                  Q9X8T8;
01-NOV-1999 (TrEMBLrel. 12, Created)
01-NOV-1999 (TrEMBLrel. 12, Last sequence update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation updat
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Molecular screening for alkane hydroxylase Gram-positive bacteria.";
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Q9XAV1;
01-NOV-1999 (TrEMBLrel.
01-JUN-2001 (TrEMBLrel.
01-OCT-2002 (TrEMBLrel.
                        "Complete genome sequence of coelicolor A3(2).";
Nature 417:141-147(2002).
EMBL; AL939118; CAB42730.1;
                                                                                                                                                                                                                                                                                                                   Putative transmembrane protein. SCO3902 OR SH24.24.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Monooxygenase;
SEQUENCE 430
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           InterPro; IPR005804; FA_desat_fam.
Pfam; PF00487; FA_desaturase; 1.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Submitted (MAR-2001) to the EMBL/GenBank/DDBJ EMBL; AJ009579; CAB51045.2; -.
                                                                                                                                                                                                       STRAIN=A3(2) / M145;
MEDLINE=21996410; PubMed=12000953;
                                                                                                                                                                                                                                    SEQUENCE FROM N.A
                                                                                                                                                                                                                                                                           Streptomycineae;
                                                                                                                                                                                                                                                                                        Bacteria; Actinobacteria; Actinobacteridae; Actinomycetales;
                                                                                                                                                                                                                                                                                                     Streptomyces coelicolor
                                                                                                                                                                                                                                                                                                                                                                                                     Q9X8T8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Smits T.H.M.;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Bacteria; Proteobacteria; Gammaproteobacteria; Pseudomonadales;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Alkane 1-monooxygenase
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Q9XAV1
                                                                               Hopwood
                                                                                                                                                                                                                                                             NCBI_TaxID=1902;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             SEQUENCE FROM N.A.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          MEDLINE=21128526; PubMed=11207749;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          STRAIN-CHAO
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pseudomonadaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pseudomonas fluorescens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   7
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Similarity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Microbiol.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                     SFWSFLPRTVWFSLSSAWHLESQRLEKLGLPTLHWKNGV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                SFWLRVPKV-----SASHLEG-----PSLHWSYGL 31
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 430 AA;
                                                                                                                                                                                                                                                                                                                                                                                                   PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Conservative
Complete proteome. AA; 54795 MW; CF
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Oxidoreductase.
                                                                                                                                                                                                                                                                          Streptomycetaceae;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Pseudomonas.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 48337 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1:307-317(1999)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        30.6%;
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17,
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Last annotation updat
1.14.15.1).
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                                                                    the
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Pred. No. 8
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Pred.
                                                                                                                                                                                                                                                                                                                                                                                                   PRT;
 C84F774C0A5AADBC CRC64;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 048E950980783E86 CRC64;
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                                                                    model
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                                                                                                                                                                                                                                                                           Streptomyces
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Length 430;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                      262
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Indels
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                                                                Streptomyces
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Gram-negative
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                                                                                                            Taylor K.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           14;
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RESULT
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                                                                     Query Match
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Best Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Matches
                                                                                                                                                                                                                                                                                                                                                                 precursors from bullfrog (Rana
J. Exp. Zool. 289:190-201(2001)
-i- FUNCTION: STIMULATES THE SE
SIMILARITY)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   01-DEC-2001 (TrEMBLrel. 19, Created)
01-DEC-2001 (TrEMBLrel. 19, Last sequence update)
01-DEC-2001 (TrEMBLrel. 23, Last annotation update)
01-MAR-2003 (TrEMBLrel. 23, Last annotation update)
Progonadoliberin I precursor [Contains: Gonadoliberin I
(Luteinizing hormone releasing hormone I) (Gonadotropin
hormone I) (GnRH I) (Luliberin I); GnRH-associated pepti
                                                                                                                                                                                                                                                                    -i- SIMILARITY: BELONGS TO THE GNRH FAMILY.
EMBL; AF188754; AAL05972.1; -.
InterPro; IPR002012; GnRH.
InterPro; IPR004079; GonadoliberinI.
                                                                                                                                                                                                                                                                                                                  -I- SUBCELLULAR LOCATION: SECRETED.
-I- TISSUE SPECIFICITY: FOREBRAIN.
-I- DEVELOPMENTAL STACE: EXPRESSED AT SIGNIFICANTLY HIGHER LEVELS
DURING POST-BREEDING. NOT EXPRESSED IN PITUITARY.
                                                                                                                                                                                                                                                                                                                                                                                                                                                TISSUE=Forebrain;
MEDLINE=21102951; PubMed=11170016;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Amphibia; Batrachia; Anura; Neobatrachia; Ranoidea; NCBI_TaxID=8400;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Q90Y63
                                                                                            SEQUENCE
                                                                                                                  MOD_RES
                                                                                                                                                                                         CHAIN
                                                                                                                                                                                                                                                           Pfam; PF00446; GnRH;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Q90Y63;
                                                                                                                                        MOD_RES
                                                                                                                                                                PEPTIDE
                                                                                                                                                                                                                          Cleavage
                                                                                                                                                                                                                                                                                                                                                                                                   "Cloning and characterization of cDNAs encoding precursors from bullfrog (Rana catesbeiana).";
                                                                                                                                                                                                                                                                                                                                                                                                                             Kwon H.B.
                                                                                                                                                                                                                                                                                                                                                                                                                                         Wang L.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                       SEQUENCE FROM N.A.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Rana catesbeiana (Bull frog).
                                                                                                                                                                            PEPTIDE
                                                                                                                                                                                                               Pyrrolidone
                                                                                                                                                                                                                                     PROSITE;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            15
                                                           Local
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OR GNRH
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       18
                                                                                                                                                            ge on pair of basic residues; Hormone; Avidone carboxylic acid.

1 24 POTENTIAL.
1 29 PROGONADOLIBERIN 1.
25 34 GONADOLIBERIN 1.
E 25 34 GONADOLIBERIN 1.
E 25 34 GONADOLIBERIN 1.
                                              Similarity 46.'
14; Conservative
                                                                                                                                                                                                                                                PR01541; GONADOLIBRNI.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Similarity
8; Conserv
                       TVSFWLRVPKVSASH-LEGPSLHWSYGLRP 33
                                                                                                                                                                                                                                                                                                                                                                                                                                     YOO M.S.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AHFEGPOVHWGKGROP 498
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TVVLLLAIVLLLSSHMIHGQ-
                                                                                            90
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRELIMINARY;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Conservative
                                                                                                                    34
                                                                                                                                        25
                                                                                            AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                      Kang
                                                                                            10291 MW;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          TISSUE SPECIFICITY,
                                                                                                                    34
                                                                                                                                       25
                                                        30.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       30.6%;
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Pred.
                                                          Score 56.5;
Pred. No. 1
                                                                                                                                                   GNRH-ASSOCIATED PEPTIDE (BY SIMILARITY).
                                                                                                                                                                                                                                                                                                                                                                              SECRETION OF GONADOTROPINS
                                                                                          AMIDATION (G-35 PROVIDE AMIDE (BY SIMILARITY).
317203B4E3DA2FE7 CRC64;
                                                                                                                            (BY SIMILARITY).
                                                                                                                                          PYRROLIDONE CARBOXYLIC ACID
                                                                                                                                                                                       PROGONADOLIBERIN
                                                                                                                                                                                                                                                                                                                                                                                                                                      Ιm
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      PRT;
 -HWSYGLRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            core 57; DB 1 red. No. 9.9; Mismatches
                                              Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                     W.B.,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       re 57; D
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                         AND
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                                                                     DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   16;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          DEVELOPMENTAL STAGE
                                                                     13;
                                                                                                                                                                                                                         Amidation;
                                              9;
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                                                                                                                                                                                                                                                                                                                                                                                                               the
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tropin releasing
d peptide I
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                                              Indels
                                                                     Length
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                                              Gaps
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Search completed: Job time : 33.964

September

24,

2003,

17:47:16

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Result
No.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Minimum DB
Maximum DB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Total number of hits satisfying chosen parameters:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Scoring table:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Title:
Perfect score:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               OM protein -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       on:
                                                                                                                                                                                                                                                                                                                        Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
                                                                                                                                                                                                                     Score
                                                                                                           136
119.5
112.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 seq length: 0 seq length: 2000000000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           protein search, using sw model
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 9:
10:
11:
12:
13:
14:
15:
16:
                                                                                                                                                                                                                                       Query
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     September 24, 2003, 16:58:36; Search time 31.6454 Seconds (without alignments)
140.442 Million cell updates/sec
                                                                                                                                                                                                                     Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           1107863 seqs, 158726573 residues
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Gapop 10.0 , Gapext 0.5
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               A_Geneseq_19Jun03:*
1: /SIDSJ/acadata/
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               US-09-848-834A-11
    99.3
91.9
80.7
76.0
58.1
55.4
55.4
                                                                                                                                                                                                                                                                                                                                                                                                    SIDSI/gcgdata/geneseq/geneseqp-embl/AA198.DAT: *
SIDSI/gcgdata/geneseq/geneseqp-embl/AA198.DAT: *
SIDSI/gcgdata/geneseq/geneseqp-embl/AA198.DAT: *
SIDSI/gcgdata/geneseq/geneseqp-embl/AA198.DAT: *
SIDSI/gcgdata/geneseq/geneseqp-embl/AA198.DAT: *
SIDSI/gcgdata/geneseq/geneseqp-embl/AA198.DAT: *
SIDSI/gcgdata/geneseq/geneseqp-embl/AA199.DAT: *
SIDSI/gcgdata/geneseq/geneseqp-embl/AA200.DAT: *
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Listing first 45 summaries
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Maximum Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    QYIKANSKFIGITELGPSLHWSYGLRPX
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         GenCore version 5.1.6 Copyright (c) 1993 - 2003 Compugen
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1981.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1982.DAT:*
/SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1983.DAT:*
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /SIDS1/gcgdata/geneseq/geneseqp-emb1/AA1980
                                                                                                                                                                                                                     Length
  28
46
47
27
750
158
158
158
158
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      23
15
15
21
21
23
21
21
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  AAU11422
AAU11430
AAR62723
AAR62791
AAY92639
AAW81329
ABB07281
AAY92649
AAY92649
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                                                                                                                                                                                                                                                                                    SUMMARIES
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                                                                                                       Synthetic immunoge
Synthetic immunoge
LHRH-containing im
LHRH-containing im
                                                                                                                                                                                                                Description
                                        Mutant human prost
TNF2-4, a TNF-alph
Human TNF-alpha an
Mutant human prost
                      Mutant human PSM a
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0.7	0.7	0.7	1.4	1.4	1.4	1.4	. 4	1.4	1.4	1.7	2.0	2.0	2.7	2.7		2.7	•	3.4			٠		3.4		3.4	-	<u>, , , , , , , , , , , , , , , , , , , </u>					5.1	5.1	5.4	5.4
	218												N	œ	œ	0	0	0	4	7	G	σ		ω	ω	7	9	7	7	Ν	9	ω	_	0	0
	21																																		
AAY49254	AAY49253	AAB20146	AAY92638	ABB07276	АВВ07275	AAW81330	AAW81328	AAY02470	AAW06129	AAU11431	ABP51516	ABP51509	AAY84424	ABB07280	AAW81327	AAW06131	AAR44398	AAY92627	AAB20152	AAB45522	AAB45530	AAB49089	AAB46190	AAB49076	AAB46177	AAY82634	AAB20147	AAR65383	AAR65389	AAY82636	AAR83561	AAU11423	AAY82632	8	AAY92641
		Growth differentia	Mutant human prost	Human TNF-alpha an	Human TNF-alpha an	5, a	TNF2-3, a TNF-alph	3	Œ	=3	HBV antigen associ	HBV antigen associ	An osteoprotegerin	Ä,	TNF2-1, a TNF-alph	Anti-cholesteryl e	tigen f	Mutant human prost	ifferen	human i	d muri	beta te	toxoi	beta/teta	toxoid	Tetanus toxoid T c	fferenti	immunos	al immunos	toxoid	IgE CH4 region con	ic immunog	s toxoid T	human pros	Mutant human prost

ALIGNMENTS

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RESULT 1
AAU11422
ID AAU1
XX AAU1
XX AU1
XX Synt
XX Synt
XX Gona
KW lute
KW lute
KW brea
KW br
                                                                                                                                                                                                                                                                                                                                                                                                                                             Key
Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Chimeric -
Chimeric -
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Gonadotrophin releasing hormone; GnRH; synthetic immunogen; lutelnising hormone releasing hormone; LHRH; contraceptive; promiscuous helper T-cell peptide epitope; immunominic peptide epitope; breast cancer; uterine cancer; gynaecological cancer; endometriosis;
                                                  WO200185763-A2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                    Modified-site
                                                                                                                                                                                                                                                                                                                                                      Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Clostridium tetani.
Mammalia.
                                                                                                                                                                               /note=
28
                                                                                                                                                                                                                                                                       /note=
16..19
/note=
20..28
                                                                                                                                      /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Location/Qualifiers
                                                                                                                                 "Amidated glycine or glycinamide"
                                                                                                                                                                                                                         "Gonadotrophin releasing hormone epitope"
                                                                                                                                                                                                                                                                                                                 "Spacer
                                                                                                                                                                                                                                                                                                                                                                                                    "Tetanus toxoid sequence (830-844 aa)"
                                                                                                                                                                                                                                                                                                            peptide"
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Synthetic immunogen peptide

ω.

12-MAR-2002 (first entry)

AAU11422 standard; peptide;

28

AA

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RESULT 2
AAU11430
  Вb
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Best Local S
Matches 27
                                                                                                                                                         Chimeric
Chimeric
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 antibodies against gonadotropin releasing hormone (GnRH also known as luteinising hormone releasing hormone, LERH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope and immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such is useful as a contraceptive and other gynaecological cancer), endometriosis, uterine fibroids, benign prostatic hypertrophy and prostate cancer. The immunogen is effective in eliciting high and specific anti-GnRH antibody titres. The present sequence is a synthetic immunogen of the invention.
                                                                                                                                                                                                        Gonadotrophin releasing hormone; GnRH; synthetic immunogen; luteinising hormone releasing hormone; LHRH; contraceptive; promiscuous helper T-cell peptide epitope; immunomimic peptide epitoperast cancer; uterine cancer; gynaecological cancer; endometriosis;
                        Peptide
Peptide
                                                               Peptide
                                                                                                       Misc-difference
                                                                                                                     Key
                                                                                                                                             Synthetic
                                                                                                                                                                                              uterine fibroid; benign prostatic hypertrophy; prostate cancer.
                                                                                                                                                                                                                                                                            Synthetic
                                                                                                                                                                                                                                                                                                    12-MAR-2002
                                                                                                                                                                                                                                                                                                                               AAU11430;
                                                                                                                                                                                                                                                                                                                                                       AAU11430 standard; peptide; 46
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 11;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     epitope or its analogue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Novel synthetic immunogen for inducing immune response against gonadotropin releasing hormone, comprises fusion peptide having promiscuous helper T-cell peptide epitope and immunomimic peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Grimes
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (APHT-) APHTON CORP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 05-MAY-2000; 2000US-202328P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           04-MAY-2001;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  15-NOV-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                invention relates to a synthetic immunogen for inducing specific
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     2002-049440/06
                                                                                                                                                                                                                                                                                                                                                                                                                           ш
                                                                                                                                                                                                                                                                                                                                                                                                                                                                             27;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Similarity
                                                                                                                                                            •
                                                                                                                                                                                                                                                                                                                                                                                                                                     QYIKANSKFIGITELGPSLHWSYGLRP 27
                                                                                                                                                                                                                                                                                                                                                                                                                        QYIKANSKFIGITELGPSLHWSYGLRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Page 8; 43pp; English.
                                                                                                                                                                                                                                                                          immunogen
                                                                                                                                                                      Clostridium
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Michaeli D,
                                                                                                                                                           Mammalia.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              28
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                                                                                                                                                                                                                                                                                                    (first entry)
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    /note=
17..31
                                                                 /note=
1..10
                                                  /note=
                                                                                                                Location/Qualifiers
                                                                                           /label=
                                                                                                                                                                                                                                                                          peptide 11.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        99.3%;
                                       "Gonadotrophin releasing aa)"
             "Spacer peptide"
                                                                            "Other- Pyro-glutamic acid
                                                                                                                                                                      tetani
                                                                                         OTHER
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Stevens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Score 147;
Pred. No.
                                                                                                                                                                                                                                                                                                                                                        AA.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              ۷C;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                        27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        DB 23;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            0;
                                                   hormone epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Length
                                                                             or 5-oxo proline
                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     28;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
                                                                                                                                                                                                                       epitope;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           prostatic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          0;
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밁 Qy

Synthetic

Location/Qualifiers

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RESULT 3
AAR62723
ID AAR6
XX AAR6
AC AAR6
XX AAR6
XX AR6
XX AR6
XX AR6
XX LHRI
XX LHRI
XX Heli
XX Vacc
XX Vacc
XX Vacc
XX Vacc
XX Syni
XX Syni
XX Key
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Best
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and other
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               The invention relates to a synthetic immunogen for inducing specific antibodies against gonadotropin releasing hormone (GnRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope immunomimic peptide epitope or its analogue. The synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         WPI;
                                                                                         vaccine; LHRH; lute androgen-dependent
                                                                                                                                                                                                   25-MAR-2003
17-SEP-1995
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     gynaecological cancer), endometriosis, uterine fibroids, benign purpose the indeposit of the immunogen is effective in elihigh and specific anti-GRH antibody titres. The present sequence is a synthetic immunogen of the invention.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Claim 11; Page 12; 43pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              gonadotropin releasing hormone, cc
promiscuous helper T-cell peptide
epitope or its analogue '-
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Novel
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Grimes S, Michaeli D,
                                                                        tetanus toxin.
                                                                                                                           Helper T cell
                                                                                                                                                             LHRH-containing immunogenic peptide
                                                                                                                                                                                                                                                           AAR62723;
                                                                                                                                                                                                                                                                                           AAR62723 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    05-MAY-2000; 2000US-202328P
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      04-MAY-2001; 2001WO-US14363
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               (APHT-)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Local
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         2002-049440/06.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             synthetic immunogen for inducing immune response against otropin releasing hormone, comprises fusion peptide having scuous helper T-cell peptide epitope and immunomimic peptide.
                                                                                                                                                                                                                                                                                                                                                                                      17
                                                                                                                                                                                                                                                                                                                                                                                                                                                           l Similarity
27; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 APHTON CORP.
                                                                                                                                                                                                                                                                                                                                                                                                         QYIKANSKFIGITEL --GPSLHWSYGLRP
                                                                                                                                                                                                                                                                                                                                                                                    QYIKANSKFIGITELSSGPSLHWSYGLRP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     46
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Conservative
                                                                                                                                                                                                  (updated)
(first entry)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     AA;
                                                                                                                         epitope; universal immune stimulator; invasin; hapten;
                                                                                                          luteinising
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   (2-10 aa)"
46
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38..46
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32..37
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /note=
                                                                                       einising hormone releas
carcinoma; antitumour;
                                                                                                                                                                                                                                                                                           peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              91.9%;
93.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "Amidated glycine or glycinamide"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "Spacer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              "Tetanus toxoid (830-844 aa)"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Stevens
                                                                                                                                                                                                                                                                                               47
                                                                                                                                                                                                                                                                                                                                                                                                                                                             0;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Score 136;
Pred. No. 1
                                                                                                                                                                                                                                                                                             A
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                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ۷C;
                                                                                     releasing hormone;
tumour; infertility;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        releasing
                                                                                                                                                                                                                                                                                                                                                                                        45
                                                                                                                                                                                                                                                                                                                                                                                                                         27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                              DB 23;
.3e-13;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        hormone epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                            prostate;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 46;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           benign prostatic ive in eliciting
                                                                                                                                                                                                                                                                                                                                                                                                                                                             2
                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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                                                                                                                                                                                                                                                                                                                                   AAR62701
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                                                                                                                                                                                                                                                                           Matches
                                                                                                                                                                                                                                                                                        Query Match
Best Local (
                                                                                                                                                                                                                                                                                                                                                                                                            and/or cytotoxic T lymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of a heterogeneous population expressing diverse HLA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Versinia. Spacer amino acid sequences (e.g. Gly-Gly) can be provided between the invasin and Th domains and between the immune stimulator and hapten components. When the hapten is IHRH, then optionally the invasin domain can be omitted from the immune stimulator component. The present sequence represents an LHRH-containing immunogenic peptide as above which can be used as a potent vaccine for treating e.g. prostatic hyperplasia, androgen-dependent carcinoma, prostatic performs tertinoma endometricate heading intering tumours.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          (LADD/) LADD
(WANG/) WANG
(ZAMB/) ZAMB
                                                                                                                                                                                                                                                                                                                                                            recurrent functional ovarian cysts, (severe) premenstrual syndrome or oestrogen-dependent breast cancer, or for induction of infertility. (Updated on 25-MAR-2003 to correct PN field.)
Helper T cell epitope; universal immune stimulator; invasin; hapten; vaccine; LHRH; luteinising hormone releasing hormone; prostate;
                                                                          25-MAR-2003
10-SEP-1995
                                                                                                                   AAR62701;
                                                                                                                                                                                                                                                                                                                                Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Synthetic immunogenic peptides are provided in which a universal stimulator is linked to a peptide or protein hapten containing B
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   27-APR-1993;
14-APR-1994;
                                                                                                                                           AAR62701 standard; peptide;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Claim
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Ladd AE,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          10-NOV-1994
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     WO9425060-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Domain
                                           LHRH-containing immunogenic peptide.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           that suppress
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Immunogenic luteinising hormone releasing hormone peptide(s)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     1994-357910/44.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              8; Page 88; 213pp; English
                                                                                                                                                                                                                                                                           24;
                                                                                                                                                                                                                                                                                          Similarity
                                                                                                                                                                                                                 QYIKANSKFIGITELGPSLHWSYGLRP 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Wang CY,
                                                                                                                                                                                                                                                                                                                                   47
                                                                                                                                                                                                                                                                                                                                                                                                     testicular carcinoma, endometriosis, benign uterine tumours
                                                                                                                                                                                                                                                                           Conservative
                                                                       (updated)
(first entry)
                                                                                                                                                                                                                                                                                                                                  Α,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          LHRH activity in males
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ۲.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   93US-0057166.
94US-0229275.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            94WO-US04832
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38..47
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19..35
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 /note=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Zamb
                                                                                                                                                                                                                                                                                       80.7%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                "LHRH hapten"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          "tetanus toxin helper T cell epitope"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "invasin domain"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 H
                                                                                                                                             27
                                                                                                                                                                                                                                                                         0;
                                                                                                                                                                                                                                                                                       Score 119.5; DB 1
Pred. No. 4.7e-11;
                                                                                                                                             Å
                                                                                                                                                                                                                                                                           Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           females
                                                                                                                                                                                                                                                                                                      DB 15;
                                                                                                                                                                                                                                                                           2
                                                                                                                                                                                                                                                                                                    Length
                                                                                                                                                                                                                                                                                                      47;
                                                                                                                                                                                                                                                                         1;
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B cell
                                                                                                                                                                                                                                                                         Gaps
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RESULT 5
AAY92639
ID AAY9
XX
AC AAY9
XX
AC 10-4
                                                                                                                                                                                                                                                      Matches
                                                                                                                                                                                                         Query Match
Best Local :
                                                                                                                                                                                                                                                                                                                                                                                                               a heterogeneous population expressing diverse HLA phenotypes, and (B) an adjuvant peptide sequence from the invasin protein of Yersinia. Spacer amino acid sequences (e.g. Gly-Gly) can be provided between the invasin and Th domains and between the immune stimulator and hapten components. When the hapten is LHRH, then optionally the invasin domain can be omitted from the immune stimulator component.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Synthetic immunogenic peptides are provided in which a universal immun stimulator is linked to a peptide or protein hapten containing B cell and/or cytotoxic T lymphocyte epitopes, giving a product which causes potent immune responses to the coupled peptide or protein. The stimulator consists of (A) a promiscuous helper T cell epitope (Th) which elicits an immune response to the coupled peptide in members of
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Claims 8, 12; Page 84; 213pp; English
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           (LADD/) LADD A E.
(WANG/) WANG C Y.
(ZAMB/) ZAMB T.
                                                            AAY92639 standard; Protein;
                                                                                                                                                                                                                                                     Sequence
                                                                                                                                                                                                                                                                                This sequence is particularly preferred. (Updated on 25-MAR-2003 to correct PN fi
                                                                                                                                                                                                                                                                                                              premenstrual syndrome or oestrogen-dependent breast cancer, induction of infertility.
                                                                                                                                                                                                                                                                                                                                           prostatic carcinoma, testicular carcinoma, endometric uterine tumours, recurrent functional ovarian cysts,
                                                                                                                                                                                                                                                                                                                                                                                   The present sequence represents an LHRH-containing, invasin-free immunogenic peptide as above which can be used as a potent vaccine
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Immunogenic luteinising hormone releasing hormone peptide(s)
that suppress LHRH activity in males and females
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   TIAM
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     27-APR-1993;
14-APR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-NOV-1994.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Key
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                              AAY92639
                                                                                                                                                                                                                                                                                                                                                                     treating e.g. prostatic hyperplasia, androgen-dependent carcinoma,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Ladd AE, Wang CY,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               28-APR-1994;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           WO9425060-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Domain
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          tetanus toxin.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        androgen-dependent carcinoma; antitumour; infertility;
                                                                                                                                                1 QYIKANSKFIGITELGPSLHWSYGLRP
                                                                                                                                                                                                           Similarity
                                                                                                                                   QYIKANSKFIGITELE --- HWSYGLRP
                                                                                                                                                                                                                                                      27
                                                                                                                                                                                            Conservative
                                                                                                                                                                                                                                                      AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     93US-0057166
94US-0229275
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18..27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Location/Qualifiers 1..17
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Zamb
                                                                                                                                                                                                         76.0%;
85.2%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  "tetanus toxin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        "LHRH hapten"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                H
                                                            750
                                                                                                                                                                                          0;
                                                                                                                                                                                                         Score 112.5; DB : Pred. No. 3.1e-10
                                                                                                                                                                                          Mismatches
                                                            A
                                                                                                                                                              27
                                                                                                                                                                                                                                                                                  field.)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  helper T cell epitope"
                                                                                                                                                                                                                         DB 15;
                                                                                                                                                                                                                                                                                                                                                       endometriosis, benign
                                                                                                                                                                                          ۲,
                                                                                                                                                                                            Indels
                                                                                                                                                                                                                         Length
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               a universal immune
                                                                                                                                                                                                                         27;
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F
                                                                                                                                                                                          Gaps
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10-AUG-2000

(first entry)

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                                                                                                                             cc as an autovaccine to induce a CTL response. Subdominant CTL epitopes, CC antibody binding regions and cysteine residues involved in disulfide CC bonds are preserved in the immunogenized forms. The method is used for CC inducing immune responses against weakly immunogenic cell-associated cell-associated cell-associated with cancers (PSM), Seq. human prostate specific membrane antigen (PSM), CC heregulin 2 (Her2) and/or fibrobhast growth factor 8b (FGF8b). The CC method comprises effecting simultaneous presentation by antigen producing CC cells (APS) of the animals immune system of: (1) at least 1 CTL CC (cytotxic T-lymphocyte) group derived from the PA and/or at least 1 CC first T helper cell group derived from the PA, and/or at least 1 CC first T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and human/murine FGF8b comprising a substantial CC part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. CC The method is used to treat prostate, prostate/breast or breast cancer when the PA is human PSM, FGF8b and Her2, respectively.

CC Note: This sequence was constructed from the wild type human PSM (C (AAY92619), which appears on pages 184-187 of the specification.
                                                                Matches
                                                                                           Query Match
                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WPI;
                                                                                                                             Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Example 1; Page -; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Inducing immune responses to weakly immunogenic, peptide antigens for the treatment of breast and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Steinaa L,
Gautam A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      (MEBI-) M & E
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      05-OCT-1998;
20-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       05-OCT-1999;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Кеу
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Homo sapiens
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    prostate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mutant human
                                                                            госат
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        2000-349917/30
305 QYIKANSKFIGITELRGSLKVPYNVGP 331
                              بــر
                                                              19;
                                                                            Similarity
                         QYIKANSKFIGITELGPSLHWSYGLRP 27
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    cancer;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Mouritsen
Birk P, Ka
                                                                                                                             750
                                                             Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    prostate
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      BIOTECH AS
                                                                                                                             AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      98DK-0001261.
98US-0105011.
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   /note= "foreign epitope" 305..319
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers 21..41
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /label= P30
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   'note= "foreign epitope'
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      /label=
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                cell-associated peptide antigen; foreign epitope
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        en S, Nie
Karlsson
                                                                          58.1%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 specific membrane antigen construct, hPSM5.1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nielsen KG,
on G;
                                                           Score 86; DB Pred. No. 0.00
                                                        DB 21; Lc
. 0.00016;
. 7;
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                                                                                          Length 750;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      prostate cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      tumor associated
                                                             Indels
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                                                         Gaps
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RESULT 6
AAW81329
ID AAW81329
ID AAW81329
ID AAW8
XX AAW8
AX AAW8
AX TIF2
XX Huma
KW Vaccanc
KW Vaccanc
KW Canc
KW ASTH
OS Synt
OS Synt
OS Synt
OS Synt
OS FIT
OS HOMC
XX W098
XX 22-C
XX IS-1
PR 15-1
PR 15-1
PR N-P(
XX Dall
XX WPI
DR N-P(
XX WPI
DR N-P(
XX WPI
DR N-P(
XX Mod:
PT Pre'
XX Mod:
PT Pre'
XX Mod:
PT Pre'
XX Mod:
PT Pre'
XX Mod:
PT Imm
PT Imm
PT FICC
CC TNE
CC TNE
CC TOP
CC T
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                                                                                                                                                                                                                                                                                                                       The present sequence represents a modified human tumour necrosis CC factor-alpha (TNF-alpha) analogue. The analogues have no residual CT MF activity and are immunogenic in a large proportion of the human CC population (by using promiscuous epitopes). The TNF-alpha analogue clis able to generate, in humans, neutralizing antibodies to wild-type human TNF alpha, has at least one fragment of TNF substituted by a peptide containing an immunodominant T-cell epitope, and at least one CC TNF-alpha B-cell epitope. The substitution causes a significant change cin the amino acid seguence of any one of the strands in the front containing any of the connecting loops or any of the B', I or D strands in the back beta-sheet. The TNF-alpha nanalogues are used as vaccines for treatment or prevention of diseases associated with excessive release cor activity of TNF-alpha, e.g. rheumatoid arthritis, Crohn's disease, diabetes, cancer of any sort, disseminated sclerosis, diabetes,
                                                                                                                         Matches
                                                                                                                                                     Query Match
Best Local 9
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Modified human tumour necrosis factor-alpha - comprises immunodominant T cell epitope, useful in vaccines to treat or prevent TNF-associated diseases, e.g. cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          cancer; disseminated sclerosis; diabetes; psoriasis; osteoporosis; asthma.
                                                                                                                                                                                                                                            Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      N-PSDB; AAV68418.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Dalum I,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      TNF2-4, a TNF-alpha analogue
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   AAW81329;
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                                                                                                                                                                                                                                                                                                    psoriasis,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Example 1;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI; 1998-594561/50
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             24-APR-1997;
15-APR-1997;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                22-OCT-1998
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        WO9846642-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Synthetic
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Human tumour necrosis factor-alpha; TNF-alpha; TNF-alpha analogue;
vaccine; rheumatoid arthritis; Crohn's disease; ulcerative colitis;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        21-APR-1999
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Homo sapiens
      115
                                                           1 QYIKANSKFIGITELGPSL
                                                                                                                      l Similarity
17; Conser
Elsner H,
                                                                                                                                                                                                                                                                                                 osteoporosis and asthma.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Page 69-70; 134pp; English.
                                                                                                                                                                                                                                            158 AA;
                                                                                                                         Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        (first
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          97US-0044187
97DK-0000418
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        98WO-DK00157
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                                                                                                                                                  55.4%;
89.5%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  entry;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Jensen MR,
                                                                                                                      0;
                                                                                                                                                     Score 82; DB 19;
Pred. No. 0.00011;
                                                              19
                                                                                                                         Mismatches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              B
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          ß
                                                                                                                                                                                 Length 158;
                                                                                                                         Indels
                                                                                                                         0
                                                                                                                         Gaps
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RESULT 7
ABB07281
ID ABB0
XX
AC ABB0
XX

ABB07281 standard; Protein;

158

0;

ABB07281;

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RESULT 8
AAY92649
ID AAY9
XX
AC AAY9
AC AAY9
AC AAY9
AC AAY9
XX
DT 10-1
XX
DE Muta
XX
KW Pros
KW Vacc
KW Pros
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                                                                                                                                                                                           δÃ
                                                                                                                                                                                                                     Matches
                                                                                                                                                                                                                                 Query Match
Best Local :
                                                                                                                                                                                                                                                                                               The invention provides a pharmaceutical vaccine composition (I) for the prevention or treatment of a self-protein-mediated pathology. The composition comprises at least one modified immunogenic self-protein (selected from modified TNF-alpha proteins) and a surfactant capable of acting as a solubilizer. (I) is useful for preventing or treating a self-protein-mediated pathology such as an inflammatory disease, rheumatoid arthritis, an inflammatory bowel disease (ulcerative collitis or Crohn's disease), cancer, cachexia, multiple sclerosis, diabetes, psoriasis, osteoporosis or asthma. (I) is useful for inducing autoantibodies to a self-protein such as TNF (tumour necrosis factor)-alpha in a human subject. (I) comporising cetylpyridinium chloride as a component is useful for immunisation of a human subject or for treatment of a human inflammatory disease. The present sequence represents a human TNF-alpha analogue managements.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Novel vaccine composition for prevention/treatment of self-protein-mediated pathology such as cancer, diabetes and asthma, comprises modified immunogenic self-protein and surfactant capable o
           Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; PSM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WPI; 2002-114542/15
N-PSDB; ABA94391.
                                            Mutant human PSM antigen splice variant construct, hPSM'10.3.
                                                                   10-AUG-2000
                                                                                           AAY92649
                                                                                                                                                                                                                                                                  Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         21-JUN-2000; 2000DK-0000966
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             20-JUN-2001; 2001WO-DK00431.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      27-DEC-2001
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            WO200197837-A1
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    antiasthmatic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        TNF-alpha; pharmaceutical;
cetylpyridinium chloride;
                                                                                                               AAY92649 standard;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  (FERR ) FERRING BV
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              antiarthritic;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 26-MAR-2002
                                                                                                                                                                         115
                                                                                                                                                                                                                                                                                                                                                                                                                                                             21; Page 46-47; 55pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           TNF-alpha analogue TNF2-4.
                                                                                                                                                                                                                    l Similarity
17; Conserv
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             OF,
                                                                                                                                                                       QYIKANSKFIGITELGDRL 133
                                                                                                                                                                                             QYIKANSKFIGITELGPSL 19
                                                                                                                                                                                                                                                                                         TNF2-4.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     solubilizer
                                                                                                                                                                                                                                                                   158
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Balchen T,
                                                                                                                                                                                                                      Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 (first entry)
                                                                   (first entry)
                                                                                                                                                                                                                                                                  AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   immunomodulator; neuroprotective; osteopathic; human;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                antiulcer;
 cell-associated peptide
                                                                                                                 Protein;
                                                                                                                                                                                                                               55.4%;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Bouman MHEM;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; vaccine; self protein; tumour necrosis factor;
immunisation; antiinflammatory; antirheumatic;
cytostatic; antidiabetic; antipsoriatic;
                                                                                                                 693
                                                                                                                                                                                                                  Score 82; DB Pred. No. 0.00 0; Mismatches
                                                                                                                                                                                                                     0
                                                                                                                 B
                                                                                                                                                                                                                               0.00011;
                                                                                                                                                                                                                                           В
 antigen;
                                                                                                                                                                                                                                           23;
                                                                                                                                                                                                                                         Length 158;
foreign epitope
                                                                                                                                                                                                                    0;
                                                                                                                                                                                                                    Gaps
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              of
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 RESULT 9
AAY92630
ID AAY9
XX
AC AAY9
XX
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Matches
                                                                                                                        Best Local
                                                                                                                                                Query Match
                                                                                                                                                                                                                                                                                                                     method comprises effecting simultaneous presentation by antigen producing cells (APCs) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA; and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and human/murine FGFBb comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/breast or breast cancer
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      AAY92627-49 are mutant immunogenized human prostate specific membrane antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as those associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGF8b). The
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Key
Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Steinaa L,
Gautam A,
                                                                                                                                                                                                                                           when the PA is human PSM, FGF8b and Her2, respectively Note: This sequence was constructed from the wild type (AAY92619), which appears on pages 184-187 of the speci
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         05-OCT-1998;
20-OCT-1998;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     05-OCT-1999;
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                                                                                                                                                                                                 Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Example 1; Page -; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Inducing immune responses to weakly immunogenic, peptide antigens for the treatment of breast and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    13-APR-2000.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Peptide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Synthetic.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (MEBI-) M & E BIOTECH AS
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Homo sapiens.
  617
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 2000-349917/30.
                       1 QYIKANSKFIGITEL----GPSLHWSY 23
                                                                                                   19;
                                                                                                                        Similarity
QYIKANSKFIGITELHVIYAPSSHNKY
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Birk P,
                                                                                                                                                                                                    693 AA;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Mouritsen S,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         98DK-0001261.
98US-0105011.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  99WO-DK00525
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /note= "foreign epitope" 617..631
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Location/Qualifiers
153..173
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     /note= "foreign epitope"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Karlsson G;
                                                                                                                        55.4%;
70.4%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Nielsen KG,
                                                                                                0;
                                                                                                                        Score 82; I
Pred. No. 0.
                                                                                                Mismatches
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                                                                                                                        DB 21;
0.0006;
                                                                                                                                                  21;
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                                                                                                                                             Length 693,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             tumor associated
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     prostate
                                                                                                                                                                                                                                                   type human PSM specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Leach
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        'n
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                                                                                                4
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                                                                                                Gaps
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AAY92630 standard; Protein;

750

A

AAY92630;

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                          Qy
                                                                                                                   CC as an autovaccine to induce a CTL response. Subdominant CTL epitopes,
CC antibody binding regions and cysteine residues involved in disulfide
CC bonds are preserved in the immunogenized forms. The method is used for
CC inducing immune responses against weakly immunogenize cell-associated
CC peptide antigens (PA) such as those associated with cancers
CC (self-proteins), e.g. human prostate specific membrane antigen (PSM),
CC heregulin 2 (Her2) and/or fibroblast growth factor 80 (FGF8D). The
CC cells (APC5) of the animals immune system of: (1) at least 1 CTL
CC (cytocxic T-lymphocyte) group derived from the PA and/or at least 1
CC first T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and human/murine FGF8D comprising a substantial
CC part of all known and predicted CTL and B-cell epitopes of the respective
CC PA and including at least one foreign T helper apitope are also claimed.
CC The method is used to treat prostate, prostate/breast or breast cancer
CC when the PA is human PSM, FGF8D and Her2, respectively.
CC (AAY92619), which appears on pages 184-187 of the specification.
                                                                       Query Match
Best Local :
                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  WPI;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Prostate specific membrane antigen; immunogenized construct; mutant; vaccination; cytotoxic T-lymphocyte immunity; breast cancer; prostate cancer; cell-associated peptide antigen; foreign epitope.
                                                                                                                   Sequence
                                                                                                                                                                                                                                                                                                                                                                                                                 antigen (PSM) constructs, which contain foreign epitopes (P2 and/or P30). The immunogenic analogues of PSM can be used in the claimed method
                                                                                                                                                                                                                                                                                                                                                                                                                                              AAY92627-49 are mutant immunogenized human prostate specific membrane
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Example 1; Page -; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       Inducing immune responses to weakly immunogenic,
peptide antigens for the treatment of breast and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gautam A,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Steinaa L,
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (MEBI-) M & E BIOTECH AS
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20-OCT-1998;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  Mutant
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              10-AUG-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          13-APR-2000
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      Peptide
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  674
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                                                          Similarity
19; Conser
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                human
QYIKANSKFIGITEL----GPSLHWSY 23
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Birk P,
                                                                                                                   750
                                                        Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Mouritsen
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                                                                                                                   Å
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  98DK-0001261
98US-0105011
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             /note= "foreign epitope"
674..688
/label= P2
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /label- P30
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Karlsson
                                                                      55.4%;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Nielsen
                                                       Score 82; DB Pred. No. 0.00 0; Mismatches
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         Haaning
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                                                                      .00066;
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                                                                                  Length 750;
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                                                        Indels
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                                                       Gaps
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RESULT 10
AAY92641
ID AAY92
XX AAY92
XX AAY92
XX IO-AU
XX Prost
KW Prost
KW Vaccii
KW Vaccii
KW Vaccii
KW Prost
XX Homo
OS Synth
XX Pepti
FT Pepti
FT Pepti
FT Pepti
FT Pepti
FT Pepti
FT Steir
PI Steir
PI Steir
PI Steir
PI Steir
PI Steir
PI Gautí
XX MEB
XX MEB
XX AAY9
CC PR 20-0(
XX MEB)
XX CC PR 200-0(
XX MEB)
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                                                     method comprises effecting simultaneous presentation by antigen producing cells (APCs) of the animals immune system of: (1) at least 1 CTL (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 B-cell group derived from the cell-associated PA; and (2) at least 1 B-cell group derived from the cell-associated PA; and (2) at least 1 first T helper cell group which is foreign to the animal. Analogues of human PSM, human Her2 and human/murine FGFBb comprising a substantial part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/preast or breast cancer when the PA is human PSM, FGFBb and Her2, respectively.

Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                              p30). The immunogenic analogues of PSM can be used in the claimed method as an autovaccine to induce a CTL response. Subdominant CTL epitopes, antibody binding regions and cysteine residues involved in disulfide bonds are preserved in the immunogenized forms. The method is used for inducing immune responses against weakly immunogenic cell-associated peptide antigens (PA) such as associated with cancers (self-proteins), e.g. human prostate specific membrane antigen (PSM), heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGF8b). The
   Sequence
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Inducing immune responses to weakly immunogenic,
peptide antigens for the treatment of breast and
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20-OCT-1998;
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98US-0105011.
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                                                                                 CC antigen (PSM) constructs, which contain foreign epitopes (P2 and/or CC P30). The immunogenic analogues of PSM can be used in the claimed method CC as an autovaccine to induce a CTL response. Subdominant CTL epitopes, CC antibody binding regions and cysteine residues involved in disulfide CC bonds are preserved in the immunogenized forms. The method is used for CC inducing immune responses against weakly immunogenic cell-associated CC peptide antigens (PA) such as those associated with cancers (2 self-proteins), e.g. human prostate specific membrane antigen (PSM), CC heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGF8b). The CC (self-proteins) e.g. simultaneous presentation by antigen (PSM), CC heregulin 2 (Her2) and/or fibroblast growth factor 8b (FGF8b). The CC (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 CC (cytotoxic T-lymphocyte) group derived from the PA and/or at least 1 CC (cytotoxic T-lymphocyte) group which is foreign to the animal. Analogues of CC muman PSM, human Her2 and human/murine FGF8b comprising a substantial CC part of all known and predicted CTL and B-cell epitopes of the respective PA and including at least one foreign T helper epitope are also claimed. The method is used to treat prostate, prostate/preast or breast cancer changes.
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20-OCT-1998;
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when the PA is human PSM, FGF8b and Her2, respectively. Note: This sequence was constructed from the wild type human PSM (AAY92619), which appears on pages 184-187 of the specification.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Example 1; Page -; 220pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Inducing immune responses to weakly immunogenic, peptide antigens for the treatment of breast and
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Steinaa L,
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98US-0105011
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/note= "foreign epitope"
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RESULT 12
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                                                                               treatment of allergy. The compound comprises at least one allergen cantigenic determinant (i) recognised by a B cell or an antibody secreted by a B cell of a non-atopic individual and at least one antipenic determinant (ii) different from the allergen that triggers T cell activation. (I) has antiallergic, antiasthmatic, antiinflammatory. Cermatological and immunosuppressive activities, and can be used in a vaccine. (I) may be used in a pharmaceutical or cosmetic medicament to treat and/or prevent allergies or a disease of allergic origin, cespecially hypersensitivities. These include rhinitis, sinusitis, componental asthma, atopic dermatitis, some forms of acute and chronic urticaria, gastro-intestinal syndromes associated with the ingestion of food allergens, oro-pharyngeal syndrome, anaphylactic reactions associated with drug hypersensitivities and/or a mixture of these. The use of (I) in the treatment of allergic conditions avoids the need for attempts the conditions are the conditions and the conditions at the conditions are the conditions and the conditions are the condition
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art drug therapies alleviate symptoms, but do not influence their causes, however (I) actually combats the cause of an allergic react The present sequence represents a specifically claimed compound pep
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    New compound for prevention and treatment of allergies least one allergen antigenic determinant recognized by least one antigenic determinant which does not trigger
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       atopic dermatitis; acute urticaria; chronic urticaria; gastro-intestinal syndrome; food allergen; oro-pharyngeal syndrome; anaphylactic reaction; drug hypersensitivity; allergic reaction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                antiallergic; antiasthmatic; antiinflammatory; dermatological;
immunosuppressive; vaccine; rhinitis; sinusitis; bronchial asthma;
                                                                                                                                                                                                                                                                                                                                                                                                                                       The present invention describes a compound (I) for the
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Claim 8; Page 35; 50pp; English.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   activation
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70.4%;
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antibodies against gonadotropin releasing hormone (GnRH also known as luteinising hormone releasing hormone, LHRH) comprising a fusion peptide which comprises a promiscuous helper T-cell peptide epitope immunomimic peptide epitope or its analogue. The synthetic immunogen is useful inducing an immune response against GnRH in an animal subject, and as such is useful as a contraceptive and in the treatment of diseases such as cancer (of the breast, uterus and othe gynaecological cancer), endometriosis, uterine fibroids, benign pros
                                                                                                                                                                                                                                                                                                           gonadotropin releasing hormone, cc
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                                                                                                                                                                                                                                                                                                           synthetic immunogen for inducing immune response against otropin releasing hormone, comprises fusion peptide having scuous helper T-cell peptide epitope and immunomimic pepti
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                                                                                                                                                                         useful in vaccines for treating allergic reactions. In the immunogens, an IGE CH4 peptide is attached C-terminally to a series of amino acids including a helper T call epitope. The immunogen may also opt. contain a fatty acid or fatty acid derivative, an invasin domain or alpha-NH2.
                                                                                                                                                                                                                                                                                 Synthetic peptide-based T cell epitope - useful
                                                                                           Sequence
                                                                                                                            The immunogen produces high titres of antibodies to the effector site in human IgE heavy chain (the CH4 domain peptide) which inhibit mast cell activation and reduce allergen-induced IgE prodn. The immunogens may be used in either a radially branching multimeric form or a
                                                                                                                                                                                                             AAR82592-R82600 and AAR83560-R83581 are peptide immunogens that are useful in vaccines for treating allergic reactions. In the immunogen
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                                                                                                                                                                                                                                                Page 68-69;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    allergy; antibody; constant heavy chain
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2.4e-05;
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RESULT 15
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                                                                                                                                                                              The present invention describes a compound (I) for the prevention and/or CC treatment of allergy. The compound comprises at least one allergen CC antigenic determinant (i) recognised by a B cell or an antibody secreted CC by a B cell of a non-atopic individual and at least one antigenic CC determinant (ii) different from the allergen that triggers T cell activation. (I) has antiallergic, antiasthmatic, antiinflammatory.
CC dermatological and immunosuppressive activities, and can be used in a CC vaccine. (I) may be used in a pharmaceutical or cosmetic medicament to CC treat and/or prevent allergies or a disease of allergic origin, CC especially hypersensitivities. These include rhinitis, sinusitis, CC bronchial asthma, atopic dermatitis, some forms of acute and chronic CC urticaria, gastro-intestinal syndromes associated with the ingestion of CC associated with drug hypersensitivities, anaphylactic reactions CC associated with drug hypersensitivities and/or a mixture of these. The CC associated with drug hypersensitivities and/or a mixture of these. The CC art drug therapies alleviate symptoms, but do not influence their CC art drug therapies alleviate symptoms, but do not influence their CC causes, however (I) actually combast the cause of an allergic reaction. The present sequence represents a specifically claimed compound peptide CC sequence from the present invention.
                                                                                         Query Match
Best Local S
                                                                           Matches
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  T cell epitope; B cell epitope; allergy; allergen; antigenic; antiallergic; antiasthmatic; antiinflammatory; dermatological; immunosuppressive; vaccine; rhinitis; sinusitis; bronchial asthma; atopic dermatitis; acute urticaria; chronic urticaria; gastro-intestinal syndrome; food allergen; oro-pharyngeal syndrome; anaphylactic reaction; drug hypersensitivity; allergic reaction.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                New compound for prevention and treatment of allergies comprises at least one allergen antigenic determinant recognized by a B cell and least one antigenic determinant which does not trigger T cell
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Claim 8; Page 35; 50pp; English.
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                                                                                                                                                  Sequence
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                                                                         Similarity
16; Conserv
                 QYIKANSKFIGITELG 16
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                                                                     54.1%; Score 80; DB 21; ilarity 100.0%; Pred. No. 3.9e-05; Conservative 0; Mismatches 0;
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Search completed: September 24, 2003, 17:40:04 Job time: 32.6454 secs

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Listing first 45 summaries
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/cgn2_6/ptodata/1/iaa/6B_COMB.pep:*
/cgn2_6/ptodata/1/iaa/PCTUS_COMB.pep:*
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US-08-448-6592-13
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US-08-446-692-57
US-08-466-692-57
US-08-468-351A-63
US-08-468-351A-63
US-08-468-351A-63
US-08-468-351A-63
US-08-464-496-28
US-08-197-484-110
PCT-US92-02121-110
PCT-US92-02121-110
PCT-US92-02121-130
US-08-464-496-32
PCT-US92-02121-130
US-08-461-952-07
US-08-461-052-6
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US-09-148-7116-6
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PCT-US93-11703-69
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                                                                                                                                               TYPE: amino acid
TOPOLOGY: linear
MOLECULE TYPE: pept
US-08-446-692-35
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US-08-446-692-35
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CURRENT APPLICATION DATA:
APPLICATION UNMEER: US/08/446,
FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
ATTORNEY/AGENT INFORMATION:
NAME: Maria C.H. Lin
REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 1151
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)415-8745
INFORMATION FOR SEQ ID NO: 35:
                                                                                Query Match
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Matches 24
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            NUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS:
ADDRESSEE: Maria C.H. Lin
STREET: 345 Park Avenue
CITY: New York
STATE: NY
COUNTRY: US
ZIP: 10154 0053
COMPUTER READABLE FORM:
MEDIUM TYPE: Ploppy disk
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 GENERAL INFORMATION:
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APPLICANT: Wang, Chang Yi
APPLICANT: Zamb, Timothy
TITLE OF INVENTION: Immunogenic LF
TITLE OF INVENTION: and synthetic
                                                                                                                                                                                                                                SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                               MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                 LENGTH:
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                 Similarity
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PCT-US95-08596-23
PCT-US95-13841-7
PCT-US95-13841-7
US-08-913-880C-15
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Pred. No. 7.8e
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Scoring table: Sequence: Perfect score: Title: OM protein -

and synthetic universal immune stimulators for vaccines

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                                                                                         Patent No.
                                                                                                         Sequence
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                                                                                                                                                                                                                                                                                                  Query Match
                                                                                                                                                                                                                                                                                    Best Local Similarity
                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                        TELEFAX: (516)751-6849
INFORMATION FOR SEQ ID NO:
SEQUENCE CHARACTERISTICS:
LENGTH: 47 amino acids
   APPLICANT:
APPLICANT:
APPLICANT:
TITLE OF INV
                                                                                                                                                                                                                                                                                                                                                                                                                                                           REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)415-8745
TELEPHONE: (516)751-6849
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08/229,275
FILING DATE: 14-APR-1994
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MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
                                                                                                                                                                                                                                                                                                                                                       MOLECULE TYPE:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ATTORNEY/AGENT INFORMATION:
NAME: Maria C.H. Lin
REGISTRATION NUMBER: 29,323
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            SOFTWARE: Patentin Rel
CURRENT APPLICATION DATA:
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APPLICANT: Zamb, Tinothy
TITLE OF INVENTION: Immunogenic LHRH peptide constructs
TITLE OF INVENTION: and synthetic universal immune stim
NUMBER OF SEQUENCES: 114
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               PRIOR APPLICATION DATA:
APPLICATION NUMBER: US 08
FILING DATE: 27-APR-1992
CLASSIFICATION: 424
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: US 08/446,692 FILING DATE: 7-JUN-1995
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FILING DATE: 7-JUN-1995
CLASSIFICATION: 424
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        CITY: New York
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                                                                                                                                                                                                                                                                                                                                                                       amino acid
GY: linear
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     INVENTION:
                                                                                                                                                                                              QYIKANSKFIGITELGGE-HWSYGLRP 46
                                                                                                         Application US/08446692
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                   Wang, Chang Yi
Zamb, Timothy
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                                                                                                                                                                                                                                                                   Conservative
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88.9%;
Immunogenic LHRH peptide constructs
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                                                                                                                                                                                                                                                                                    Score 119.5;
Pred. No. 7.1
                                                                                                                                                                                                                                                                  Mismatches
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Patent No. 5843446
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Best Local
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INFORMATION FOR SEQ ID NO:
                                                                                                                                                                                                                                                                                                                                                                                                      GENERAL INFORMATION:
                                                                                                                                                                                                                                                                                                                                                        APPLICANT:
APPLICANT:
              PRIOR APPLICATION DATA:
APPLICATION NUMBER: US |
FILING DATE: 7-JUN-1995
                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
                                                                                                        CURRENT APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         REGISTRATION NUMBER: 29,323
REFERENCE/DOCKET NUMBER: 11
TELECOMMUNICATION INFORMATION:
TELEPHONE: (212)415-8745
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MEDIUM TYPE: Floppy disk
                                                                                                                                                                                                                                                                                           CORRESPONDENCE ADDRESS
                                                                                                                                                                                                                                                                                                                     TITLE OF INVENTION: Immunogenic LHRH peptide
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                                                                                                                                                                                                                                                                                                          NUMBER OF SEQUENCES:
                                                                        APPLICATION NUMBER: FILING DATE: 7-JUN
                                                                                                                    COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.25
                                                                                                                                                                                                                                                ADDRESSEE: Marin Avenue
                                                         CLASSIFICATION:
                                                                                                                                                                                                                COUNTRY:
                                                                                                                                                                                                                                 STATE:
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FILING DATE: 7-JUN-1995
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CLASSIFICATION:
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23; Conserv
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10154-0053
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Zamb, Timothy
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                                                              7-JUN-1995
V: 424
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85.2%;
                                                                                                                                                                                                                                                                                                                                          Immunogenic LHRH peptide constructs
                                US 08/446,692
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Pred. No. 5.
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                                                                                                                                                                                                                                                                                                                           immune stimulators
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